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(54) Title: STRESS-REGULATED GENES OF PLANTS, TRANSGENIC PLANTS CONTAINING SAME, AND METHODS OF USE

(57) Abstract: The present invention relates to clusters of plant genes that are regulated in response to one or more stress conditions. The present invention also relates to isolated plant stress-regulated genes, including portions thereof comprising a coding sequence or a regulatory element, and to consensus sequences comprising a plant stress-regulated regulatory element. In addition, the invention relates to a recombinant polynucleotide, which includes a plant stress-regulated gene, or functional portion thereof, operatively linked to a heterologous nucleotide sequence. The invention further relates to a transgenic plant, which contains a plant stress-regulated gene or functional portion thereof that was introduced into a progenitor cell of the plant. In addition, the invention relates to methods of using a plant stress-regulated gene to confer upon a plant a selective advantage to a stress condition. The invention also relates to a method of identifying an agent that modulates the activity of a plant stress-regulated regulatory element.

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**STRESS-REGULATED GENES OF PLANTS, TRANSGENIC PLANTS
CONTAINING SAME, AND METHODS OF USE**

BACKGROUND OF THE INVENTION

FIELD OF THE INVENTION

The present invention relates generally to plant genes, the expression of which are regulated in response to stress, and more specifically to the gene regulatory elements involved in a stress-induced response in plants, to uses of the coding sequences and regulatory elements of such plant stress-regulated genes, and to transgenic plants
5 genetically modified to express such a coding sequence or to express a heterologous polynucleotide from such a regulatory element.

BACKGROUND INFORMATION

Microarray technology is a powerful tool that can be used to identify the
10 presence and level of expression of a large number of polynucleotides in a single assay. A microarray is formed by linking a large number of discrete polynucleotide sequences, for example, a population of polynucleotides representative of a genome of an organism, to a solid support such as a microchip, glass slide, or the like, in a defined pattern. By contacting the microarray with a nucleic acid sample obtained
15 from a cell of interest, and detecting those polynucleotides expressed in the cell can hybridize specifically to complementary sequences on the chip, the pattern formed by the hybridizing polynucleotides allows the identification of clusters of genes that are expressed in the cell. Furthermore, where each polynucleotide linked to the solid support is known, the identity of the hybridizing sequences from the nucleic acid
20 sample can be identified.

A strength of microarray technology is that it allows the identification of differential gene expression simply by comparing patterns of hybridization. For example, by comparing the hybridization pattern of nucleic acid molecules obtained from cells of an individual suffering from a disease with the nucleic acids obtained
25 from the corresponding cells of a healthy individual, genes that are differentially expressed can be identified. The identification of such differentially expressed genes

provides a means to identify new genes, and can provide insight as to the etiology of a disease.

Microarray technology has been widely used to identify patterns of gene expression associated with particular stages of development or of disease conditions in animal model systems, and is being applied to the identification of specific patterns of gene expression in humans. The recent availability of information for the genomes of plants provides a means to adapt microarray technology to the study of plant gene expression.

Plants and plant products provide the primary sustenance, either directly or indirectly, for all animal life, including humans. For the majority of the world's human population and for many animals, plants and plant products provide the sole source of nutrition. As the world population increases, the best hope to prevent widespread famine is to increase the quantity and improve the quality of food crops, and to make the crops available to the regions of the world most in need of food.

Throughout history, a continual effort has been made to increase the yield and nutritious value of food crops. For centuries, plants having desirable characteristics such as greater resistance to drought conditions or increased size of fruit were crossbred and progeny plants exhibiting the desired characteristics were selected and used to produce seed or cuttings for propagation. Using such classical genetic methods, plants having, for example, greater disease resistance, increased yield, and better flavor have been obtained. The identification of plant genes involved in conferring a selective advantage on the plant to an environmental challenge would facilitate the generation and yield of plants, thereby increasing the available food supply to an increasing world population. The involvement of these genes in a single organism to responses to multiple stress conditions, however, remains unknown. Thus, a need exists to identify plant genes and polynucleotides that are involved in modulating the response of a plant to changing environmental conditions. The present invention satisfies this need and provides additional advantages.

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SUMMARY OF THE INVENTION

The present invention relates to clusters of genes that are regulated in response to a stress condition in plants. Such clusters include, for example, plant polynucleotides

whose expression is altered in response to two or more different stress conditions; and plant polynucleotides the expression of which are altered in response to one stress condition, but not to others. The identification of such clusters, using microarray technology, has allowed the identification of plant stress-regulated genes in

5 *Arabidopsis thaliana* (see Tables 1 and 2); and homologs and orthologs thereof in other plant species (see Table 32). Thus, the invention provides isolated polynucleotide portions of *Arabidopsis* plant stress-regulated genes, and homologs and orthologs thereof; variants of such sequences, and polynucleotides encoding substantially similar plant stress-regulated polypeptides expressed therefrom. Such sequences include, for

10 example, sequences encoding transcription factors; enzymes, including kinases; and structural proteins, including channel proteins (see Tables 29-31). Accordingly, the present invention also relates to an isolated polynucleotide comprising all or a portion of a plant stress-regulated gene, and to polynucleotide portions thereof, including a coding region (open reading frame), which encodes all or a portion of a stress-

15 regulated polypeptide, for example, as set forth in SEQ ID NOS:1-2703; and a regulatory element involved in regulating the response of the plant to a stress condition such exposure to an abnormal level of salt, osmotic pressure, temperature or any combination thereof, for example, as set forth in SEQ ID NOS:2704-5379.

The present invention also relates to a recombinant polynucleotide, which

20 contains a nucleotide sequence of a plant stress-regulated gene or functional portion thereof operatively linked to a heterologous nucleotide sequence. In one embodiment, the recombinant polynucleotide comprises a plant stress-regulated gene regulatory element operatively linked to a heterologous nucleotide sequence, which is not regulated by the regulatory element in a naturally occurring plant. The heterologous

25 nucleotide sequence, when expressed from the regulatory element, can confer a desirable phenotype to a plant cell containing the recombinant polynucleotide. In another embodiment, the recombinant polynucleotide comprises a coding region, or portion thereof, of a plant stress-regulated gene operatively linked to a heterologous promoter. The heterologous promoter provides a means to express an encoded stress-

30 regulated polypeptide constitutively, or in a tissue-specific or phase-specific manner.

Accordingly, in one aspect, the present invention provides an isolated polynucleotide comprising a nucleotide sequence of a plant gene that hybridizes under

stringent conditions, preferably high stringency conditions, to any one of SEQ ID NOS:1-5379 (see Tables 1 and 2), including to a coding region (SEQ ID NOS:1-2703) or a regulatory region, which can alter transcription of an operatively linked nucleic acid sequence in response to an abiotic stress (SEQ ID NOS:2704-5379; see Table 2), or to a complement thereof. Additional aspects provide sequences that hybridize under stringent conditions, preferably high stringency conditions, to the complements of SEQ ID NO 1-1261 (cold responsive genes; Tables 3-6), SEQ ID NOS:2227-2427 (saline responsive genes; Tables 7-10), SEQ ID NOS:2428-2585 (osmotic responsive genes; Tables 11-14), SEQ ID NOS:1699-1969 (cold and osmotic responsive genes; Tables 15-17), SEQ ID NOS:1970-2226 (cold and saline responsive genes; Tables 18-20), SEQ ID NOS:2586-2703 (osmotic and saline responsive genes; Tables 21-23), and SEQ ID NOS:1262-1698 (cold, osmotic and saline responsive genes; Tables 24-26), and which can comprise regulatory regions that can alter transcription in response to cold stress, osmotic stress, saline stress, or combinations thereof (SEQ ID NOS:2704-5379; see Table 2). Also provided are nucleotide sequences complementary thereto, and expression cassettes, plants and seeds comprising any of the above isolated sequences.

In another aspect, the present invention provides an isolated polynucleotide comprising a plant nucleotide sequence that hybridizes under stringent conditions, preferably high stringency conditions, to the complement of any one of SEQ ID NOS:1-2703 (Table 1), including to a coding region thereof (SEQ ID NOS:2704-5379), wherein expression of said coding region is altered in response to an abiotic stress. Additional aspects provide sequences that hybridize under high stringency conditions to the complements of SEQ ID NO 1-1261 (cold responsive genes; Tables 3-6), SEQ ID NOS:2227-2427 (saline responsive genes; Tables 7-10), SEQ ID NOS:2428-2585 (osmotic responsive genes; Tables 11-14), SEQ ID NOS:1699-1969 (cold and osmotic responsive genes; Tables 15-17), SEQ ID NOS:1970-2226 (cold and saline responsive genes; Tables 18-20), SEQ ID NOS:2586-2703 (osmotic and saline responsive genes; Tables 21-23), and SEQ ID NOS:1262-1698 (cold, osmotic and saline responsive genes; Tables 24-26), and which can comprise a coding region whose transcription is altered in response to cold stress, osmotic stress, saline stress, or a combination thereof. Also provided are nucleotide

sequences complementary thereto, and expression cassettes, plants and seeds comprising any of the above sequences.

The invention further relates to a method of producing a transgenic plant, which comprises at least one plant cell that exhibits altered responsiveness to a stress condition.

5 In one embodiment, the method can be performed by introducing a polynucleotide portion of plant stress-regulated gene into a plant cell genome, whereby the polynucleotide portion of the plant stress-regulated gene modulates a response of the plant cell to a stress condition.

The polynucleotide portion of the plant stress-regulated gene can encode a stress-regulated polypeptide or functional peptide portion thereof (see SEQ ID NOS:1-2703), wherein expression of the stress-regulated polypeptide or functional peptide portion thereof either increases the stress tolerance of the transgenic plant, or decreases the stress tolerance of the transgenic plant. The polynucleotide portion of the plant stress-regulated gene encoding the stress-regulated polypeptide or functional peptide portion thereof can be operatively linked to a heterologous promoter. The polynucleotide portion of the plant stress-regulated gene also can comprise a stress-regulated gene regulatory element (see SEQ ID NOS:2704-5379). The stress-regulated gene regulatory element can integrate into the plant cell genome in a site-specific manner, whereupon it can be operatively linked to a heterologous nucleotide sequence, which can be expressed in response to a stress condition specific for the regulatory element; or can be a mutant regulatory element, which is not responsive to the stress condition, whereby upon integrating into the plant cell genome, the mutant regulatory element disrupts an endogenous stress-regulated regulatory element of a plant stress-regulated gene, thereby altering the responsiveness of the plant stress-regulated gene to the stress condition.

In one aspect, the invention provides a method for producing a transgenic plant by introducing into at least one plant cell a recombinant nucleic acid construct comprising i) all or a portion of any one of SEQ ID NOS:1-5379; ii) a polynucleotide comprising a coding region that hybridizes under conditions of high stringency to all or a portion of the complement of any one of SEQ ID NOS:1-2703; iii) a polynucleotide comprising a sequence that alters transcription of an operatively linked coding region in response to abiotic stress, and that hybridizes under conditions of

high stringency to the complement of any one of SEQ ID NOS:2704-5379; iv) a polynucleotide having at least 90% sequence identity with any one of SEQ ID NO:1-5379; v) a fragment of any one of the sequences of iv), wherein the fragment comprises a coding region; or vi) a fragment of any one of the sequences of iv),
5 wherein the fragment comprises a nucleotide sequence that alters transcription of an operatively linked coding region in response to abiotic stress; and regenerating a plant from the at least one plant cell.

Another aspect provides a method for producing a transgenic plant comprising introducing into at least one plant cell a recombinant nucleic acid construct
10 comprising i) any one of SEQ ID NOS:1-1261 or 2704-3955; ii) a polynucleotide comprising a coding region that hybridizes under conditions of high stringency to the complement of any one of SEQ ID NOS:1-1261; iii) a polynucleotide comprising a sequence that alters transcription of an operatively linked coding region in response to cold stress that hybridizes under conditions of high stringency to the complement of
15 any one of SEQ ID NOS:2704-3955; iv) a polynucleotide that has at least 90% sequence identity with any one of SEQ ID NOS:1-1261 or 2704-3955; v) a fragment of any one of the sequences of iv), wherein the fragment comprises a coding region; or vi) a fragment of any one of the sequences of iv) wherein the fragment comprises a sequence or region that alters transcription of an operatively linked
20 coding region in response to cold stress; and regenerating a plant from the at least one plant cell.

In another aspect, the invention provides a method for producing a transgenic plant by introducing into at least one plant cell a recombinant nucleic acid construct comprising i) any one of SEQ ID NOS:2428-2585 or 5108-5263; ii) a
25 polynucleotide comprising a coding region that hybridizes under conditions of high stringency to the complement of any one of SEQ ID NOS:2428-2585; iii) a polynucleotide comprising a sequence that alters transcription of an operatively linked coding region in response to osmotic stress that hybridizes under conditions of high stringency to the complement of any one of SEQ ID NOS:5108-5263; iv) a
30 polynucleotide that has at least 90% sequence identity with any one of SEQ ID NOS:2428-2585 or 5108-5263; v) a fragment of any one of the sequences of iv), wherein the fragment comprises a coding region; or vi) a fragment of any one of the

sequences of iv), wherein the fragment comprises a sequence or region that alters transcription of an operatively linked coding region in response to osmotic stress; and regenerating a plant from the at least one plant cell.

Still another aspect provides a method for producing a transgenic plant comprising introducing into at least one plant cell a recombinant nucleic acid construct comprising i) any one of SEQ ID NOS:2227-2427 or 4910-5107; ii) a polynucleotide comprising a coding region that hybridizes under conditions of high stringency to the complement of any one of SEQ ID NOS:2227-2427; iii) a polynucleotide comprising a sequence that alters transcription of an operatively linked coding region in response to saline stress that hybridizes under conditions of high stringency to the complement of any one of SEQ ID NOS:2227-2427; iv) a polynucleotide that has at least 90% sequence identity with any one of SEQ ID NOS:4910-5107; v) a fragment of any one of the sequences of iv), wherein the fragment comprises a coding region; or vi) a fragment of any one of the sequences of iv) wherein the fragment comprises a sequence or region that alters transcription of an operatively linked coding region in response to saline stress; and regenerating a plant from the at least one plant cell.

Yet another aspect provides a method for producing a transgenic plant comprising introducing into at least one plant cell a recombinant nucleic acid construct comprising i) any one of SEQ ID NOS:1699-1969 or 4389-4654; ii) a polynucleotide comprising a coding region that hybridizes under conditions of high stringency to the complement of any one of SEQ ID NOS:1699-1969; iii) a polynucleotide comprising a sequence that alters transcription of an operatively linked coding region in response to a combination of cold and osmotic stress that hybridizes under conditions of high stringency to the complement of any one of SEQ ID NOS:4389-4654; iv) a polynucleotide that has at least 90% sequence identity with any one of SEQ ID NOS:1699-1969 or 4389-4654; v) a fragment of any one of the sequences of iv), wherein the fragment comprises a coding region; or vi) a fragment of any one of the sequences of iv), wherein the fragment comprises a sequence or region that alters transcription of an operatively linked coding region in response to a combination of cold and osmotic stress; and regenerating a plant from the at least one plant cell.

Yet another aspect provides a method for producing a transgenic plant comprising introducing into at least one plant cell a recombinant nucleic acid construct comprising i) any one of SEQ ID NOS:1970-2226 or 4655-4909; ii) a polynucleotide comprising a coding region that hybridizes under conditions of high stringency to the complement of any one of SEQ ID NOS:1970-2226; iii) a polynucleotide comprising a sequence that alters transcription of an operatively linked coding region in response to a combination of cold and saline stress that hybridizes under conditions of high stringency to the complement of any one of SEQ ID NOS:4655-4909; iv) a polynucleotide that has at least 90% sequence identity with any one of SEQ ID NOS:1970-2226 or 4655-4909; v) a fragment of any one of the sequences of iv), wherein the fragment comprises a coding region; or vi) a fragment of any one of the sequences of iv), wherein the fragment comprises a sequence or region that alters transcription of an operatively linked coding region in response to a combination of cold and saline stress; and regenerating a plant from the at least one plant cell.

A further aspect provides a method for producing a transgenic plant comprising introducing into at least one plant cell a recombinant nucleic acid construct comprising i) any one of SEQ ID NOS:2586-2703 or 5264-5379; ii) a polynucleotide comprising a coding region that hybridizes under conditions of high stringency to the complement of any one of SEQ ID NOS:2586-2703; iii) a polynucleotide comprising a sequence that alters transcription of an operatively linked coding region in response to a combination of osmotic and saline stress that hybridizes under conditions of high stringency to the complement of any one of SEQ ID NOS: 5264-5379; iv) a polynucleotide that has at least 90% sequence identity with any one of SEQ ID NOS:2586-2703 or 5264-5379; v) a fragment of any one of the sequences of iv), wherein the fragment comprises a coding region; or vi) a fragment of any one of the sequences of iv), wherein the fragment comprises a sequence or region that alters transcription of an operatively linked coding region in response to a combination of osmotic and saline stress; and regenerating a plant from the at least one plant cell.

Another aspect provides a method for producing a transgenic plant comprising introducing into at least one plant cell a recombinant nucleic acid construct

comprising i) any one of SEQ ID NOS:1262-1698 or 3956-4388; ii) a polynucleotide comprising a coding region that hybridizes under conditions of high stringency to the complement of any one of SEQ ID NOS:1262-1698; iii) a polynucleotide comprising a sequence that alters transcription of an operatively linked coding region in response to a combination of cold, osmotic and saline stress that hybridizes under conditions of high stringency to the complement of any one of SEQ ID NOS:3956-4388; iv) a polynucleotide that has at least 90% sequence identity with any one of SEQ ID NOS:1262-1698 or 3956-4388; v) a fragment of any one of the sequences of iv), wherein the fragment comprises a coding region; or vi) a fragment of any one of the sequences of iv) wherein the fragment comprises a sequence or region that alters transcription of an operatively linked coding region in response to a combination of cold, osmotic and saline stress; and regenerating a plant from the at least one plant cell. Further aspects include plants and uniform populations of plants made by the above methods as well as seeds and progeny from such plants.

In another embodiment, a transgene introduced into a plant cell according to a method of the invention can encode a polypeptide that regulates expression from an endogenous plant stress-regulated gene. Such a polypeptide can be, for example, a recombinantly produced polypeptide comprising a zinc finger domain, which is specific for the regulatory element, and an effector domain, which can be a repressor domain or an activator domain. The polynucleotide encoding the recombinant polypeptide can be operatively linked to and expressed from a constitutively active, inducible or tissue specific or phase specific regulatory element. Expression of the recombinant polypeptide from a plant stress-regulated promoter as disclosed herein can be particularly advantageous in that the polypeptide can be coordinately expressed with the endogenous plant stress-regulated genes upon exposure to a stress condition. The invention also provides transgenic plants produced by a method as disclosed, as well as to a plant cell obtained from such transgenic plant, wherein said plant cell exhibits altered responsiveness to the stress condition; a seed produced by the transgenic plant; and a cDNA or genomic DNA library prepared from the transgenic plant, or from a plant cell from said transgenic plant, wherein said plant cell exhibits altered responsiveness to the stress condition.

In one aspect, the invention provides an isolated nucleic acid molecule comprising a nucleotide sequence substantially similar to a sequence of any one of SEQ ID NOS:2704-5379, which can alter transcription of an operatively linked polynucleotide in a plant cell in response to an abiotic stress. Additional aspects of the invention provide isolated polynucleotides, including, for example, sequences substantially similar to any of SEQ ID NOS:2704-3955, which can alter transcription of an operatively linked polynucleotide in response to a cold stress; isolated polynucleotides substantially similar to a sequence of any of SEQ ID NOS:5108-5263, which can alter transcription of an operatively linked polynucleotide in response to an osmotic stress; isolated polynucleotides substantially similar to a sequence of any of SEQ ID NOS:4910-5107, which can alter transcription of an operatively linked polynucleotide in response to a saline stress; isolated polynucleotides substantially similar to a sequence of any of SEQ ID NOS:4389-4654, which can alter transcription of an operatively linked polynucleotide in response to a combination of cold and osmotic stresses; isolated polynucleotides substantially similar to a sequence of any of SEQ ID NOS:4655-4909, which can alter transcription of an operatively linked polynucleotide in response to a combination of cold and saline stresses; isolated polynucleotides substantially similar to a sequence of any of SEQ ID NOS:5264-5379, which can alter transcription of an operatively linked polynucleotide in response to a combination of osmotic and saline stresses; and isolated polynucleotides substantially similar to a sequence of any of SEQ ID NOS:3956-4388, which can alter transcription of an operatively linked polynucleotide in response to a combination of cold, osmotic and saline stresses.

Related aspects of the invention provide an isolated nucleotide sequences that can alter transcription of an operatively linked polynucleotide in response to an abiotic stress, and that hybridize under stringent conditions, preferably highly stringent conditions, to the complement of any one of SEQ ID NOS:2704-5379. Additional aspects provide an isolated nucleotide sequence that can alter transcription of an operatively linked polynucleotide in response to cold stress, and that hybridizes under stringent conditions, preferably highly stringent conditions, to the complement of any one of SEQ ID NOS:2704-3955; a nucleotide sequence that alters transcription of an operatively linked polynucleotide in response to osmotic stress, and that

hybridizes under stringent conditions, preferably highly stringent conditions, to the complement of any one of SEQ ID NOS:5108-5263; a nucleotide sequence that alters transcription of an operatively linked polynucleotide in response to saline stress, and that hybridizes under stringent conditions, preferably highly stringent conditions, to the complement of any one of SEQ ID NOS:4910-5107; a nucleotide sequence that alters transcription of an operatively linked polynucleotide in response to a combination of cold and osmotic stress, and that hybridizes under stringent conditions, preferably highly stringent conditions, to the complement of any one of SEQ ID NOS:4389-4654; a nucleotide sequence that alters transcription of an operatively linked polynucleotide in response to a combination of cold and saline stress, and that hybridizes under stringent conditions, preferably highly stringent conditions, to the complement of any one of SEQ ID NOS:4655-4909; a nucleotide sequence that alters transcription of an operatively linked polynucleotide in response to an combination of osmotic and saline stress, and that hybridizes under stringent conditions, preferably highly stringent conditions, to the complement of any one of SEQ ID NOS:5264-5379; and a nucleotide sequence that alters transcription of an operatively linked polynucleotide in response to a combination of cold, osmotic and saline stress, and that hybridizes under stringent conditions, preferably highly stringent conditions, to the complement of any one of SEQ ID NOS:3956-4388.

Further aspects provide an expression cassette comprising as operatively linked components any of the above isolated nucleic acid sequences that alter transcription, a coding region, and a termination sequence. Also provided are host cells and seeds comprising such expression cassettes, plants containing such host cells and seeds and progeny of plants containing said host cells. In related aspects, the coding region of the expression cassettes comprise sequences encoding marker proteins and sequences involved in gene silencing such as antisense sequences, double stranded RNAi sequences, a triplexing agent, and sequences comprising dominant negative mutations. In additional related aspects, the coding regions comprise sequences encoding polypeptides that alter the response of a plant to an abiotic stress.

The present invention also relates to a method of modulating the responsiveness of a plant cell to a stress condition. Such a method can be performed, for example, by introducing a polynucleotide portion of a plant stress-regulated genes

described herein into the plant cell, thereby modulating the responsiveness of the plant cell to a stress condition. Such a method can result in the responsiveness of the plant cell being increased upon exposure to the stress condition, which, in turn, can result in increased or decreased tolerance of the plant cell to a stress condition; or can
5 result in the responsiveness of the plant cell to the stress condition being decreased, which, in turn, can result in increased or decreased tolerance of the plant cell to a stress condition. In one embodiment, the polynucleotide portion of the plant stress-regulated gene can integrate into the genome of the plant cell, thereby modulating the responsiveness of the plant cell to the stress condition. In another embodiment, the
10 polynucleotide portion of the plant stress-regulated gene encodes a stress-regulated polypeptide or functional peptide portion thereof, and can be operatively linked to a heterologous promoter. The polynucleotide portion of the plant stress-regulated gene also can contain a mutation, whereby upon integrating into the plant cell genome, the polynucleotide disrupts (knocks-out) an endogenous plant stress-regulated sequence,
15 thereby modulating the responsiveness of the plant cell to the stress condition. Depending on whether the knocked-out gene encodes an adaptive or a maladaptive stress-regulated polypeptide, the responsiveness of the plant will be modulated accordingly. In still another embodiment, the polynucleotide portion of the plant stress-regulated gene can comprise a stress-regulated regulatory element, which can
20 be operatively linked to a heterologous nucleotide sequence, the expression of which can modulate the responsiveness of the plant cell to a stress condition. Such a heterologous nucleotide sequence can encode, for example, a stress-inducible transcription factor such as DREB1A. The heterologous nucleotide sequence also can encode a polynucleotide that is specific for a plant stress-regulated gene, for example,
25 an antisense molecule, an RNAi molecule, a ribozyme, and a triplexing agent, any of which, upon expression in the plant cell, reduces or inhibits expression of a stress-regulated polypeptide encoded by the gene, thereby modulating the responsiveness of the plant cell to a stress condition, for example, an abnormal level of cold, osmotic pressure, and salinity. Accordingly, the invention also relates to a plant cell obtained
30 by such a method, and to a plant comprising such a plant cell.

The present invention also relates to a method of expressing a heterologous nucleotide sequence in a plant cell. Such a method can be performed, for example, by

introducing into the plant cell a plant stress-regulated regulatory element operatively linked to the heterologous nucleotide sequence, whereby, upon exposure of the plant cell to a stress condition, the heterologous nucleotide sequence is expressed in the plant cell. In a preferred embodiment, the stress regulated element is any of the sequences described herein that are capable of altering transcription of an operatively linked sequence in response to an abiotic stress, for example, SEQ ID NOS:2704-5379. The heterologous nucleotide sequence can encode a selectable marker, a diagnostic marker, or a polypeptide that confers a desirable trait upon the plant cell, for example, a polypeptide that improves the nutritional value, digestibility or ornamental value of the plant cell, or a plant comprising the plant cell.

The present invention further relates to a method of modulating the activity of a biological pathway in a plant cell, wherein the pathway involves a stress-regulated polypeptide or a non-protein regulatory molecule. Such a method can be performed by introducing a polynucleotide portion of a plant stress-regulated gene, or a polynucleotide derived therefrom, for example a ribozyme derived from a nucleotide sequence as set forth in any of SEQ ID NOS:1-2703, into the plant cell, thereby modulating the activity of the biological pathway. The method can be performed with respect to a pathway involving any of the stress-regulated polypeptides as disclosed herein or encoded by the polynucleotides disclosed herein, as well as using homologs or orthologs thereof.

The present invention also relates to a method of identifying a polynucleotide that modulates a stress response in a plant cell. In one embodiment the method comprises determining gene expression in a plant exposed to at least one stress to produce an expression profile and identifying sequences whose expression is altered at least two fold compared to plants not exposed to the stress. Such an expression profile can be obtained, for example, by contacting an array of probes representative of a plant cell genome with nucleic acid molecules expressed in a plant cell exposed to the stress; and detecting one or more nucleic acid molecules expressed at a level different from a level of expression in the absence of the stress. The method can further comprise introducing the differentially expressed nucleic acid molecule into a plant cell; and detecting a modulated response of the genetically modified plant cell to a stress, thereby identifying a polynucleotide that modulates a stress response in a

plant cell. The stress can be any stress, for example, an abiotic stress such as exposure to an abnormal level of cold, osmotic pressure, and salinity. The contacting is under conditions that allow for selective hybridization of a nucleic acid molecule with probe having sufficient complementarity, for example, under stringent hybridization conditions. Expression of the nucleic acid molecule can increase or decrease the tolerance of the plant cell to the stress, and the nucleic acid molecule can be expressed at a level that is less than or greater than the level of expression in the absence of the stress.

The present invention additionally relates to a method of identifying a stress condition to which a plant cell was exposed by comparing an expression profile from a test plant suspected of having been exposed to at least one stress condition to an expression profile obtained from a reference plant, preferably of the same species, which has been exposed to the suspected stress condition. Such a method can be performed, for example, by contacting nucleic acid molecules expressed in the test plant cell with an array of probes representative of the plant cell genome; detecting a profile of expressed nucleic acid molecules characteristic of a stress response, and comparing the expression pattern in the test plant to the expression pattern obtained from a reference plant thereby identifying the stress condition to which the plant cell was exposed. The contacting is under conditions that allow for selective hybridization of a nucleic acid molecule with probes having sufficient complementarity, for example, under stringent hybridization conditions. The profile can be characteristic of exposure to a single stress condition, for example, an abnormal level of cold, osmotic pressure, or salinity, or can be characteristic of exposure to more than one stress condition, for example, cold, increased osmotic pressure and increased salinity. In one embodiment, the nucleotide sequence of a gene whose expression is detected is selected from a polynucleotide comprising any of SEQ ID NOS:1-2703. In further embodiments, the nucleotide sequence of a gene that is expressed in response a particular stress or combination of stresses can comprise a polynucleotide expressed in response to cold stress (SEQ ID NOS:1-1261), osmotic stress (SEQ ID NOS:2428-2585), saline (salt) stress (SEQ ID NOS:2227-2427), a combination of cold and osmotic stress (SEQ ID NOS:1699-1969), a combination of saline and osmotic stress (SEQ ID NOS:1970-

2226), a combination of osmotic and saline stress (SEQ ID NOS:2586-2703), or a combination of cold, osmotic and saline stress (SEQ ID NOS:1262-1698).

The present invention further relates to a transgenic plant, which contains a nucleic acid construct comprising a polynucleotide portion of plant stress-regulated polynucleotide. In one embodiment, the transgenic plant exhibits altered responsiveness to a stress condition as compared to a corresponding reference plant not containing the construct. Such a transgenic plant can contain, for example, a construct that disrupts an endogenous stress-regulated gene in the plant, thereby reducing or inhibiting expression of the gene in response to a stress condition. Such a knock-out can increase or decrease tolerance of the plant to a stress condition. The transgene also can comprise a coding sequence of a plant stress-regulated gene, which can be operatively linked to a heterologous regulatory element such as a constitutively active regulatory element, an regulated regulatory element, a tissues specific or phase specific regulatory element, or the like. In another embodiment, the transgenic plant contains a nucleic acid construct comprising a plant stress-regulated regulatory element, which can be operatively linked to a heterologous nucleotide sequence that can encode a polypeptide. Expression of the heterologous polypeptide can confer a desirable characteristic on the plant, for example, can improve the nutritional or ornamental value of the transgenic plant. In still another embodiment, the transgenic plant contains multiple nucleic acid constructs, which can be multiple copies of the same construct, or can be two or more different constructs.

The present invention also relates to a plant stress-regulated regulatory element, which is obtained from a plant stress-regulated polynucleotide disclosed herein for example any of SEQ ID NOS:2704-5379; a homolog or ortholog thereof. The invention also provides a method of identifying an agent, for example a transcription factor, that specifically binds to or activates a plant stress-regulated regulatory element. Such a method can be performed, for example, by contacting the regulatory element with a plant cell extract, and identifying polypeptides that specifically bind to the regulatory element. Confirmation that the specifically binding polypeptide is a transcription factor can be demonstrated using, for example, the stress-regulated regulatory element operably linked to a reporter gene, and detecting expression of the reporter gene. Control constructs comprising a regulatory element, other than a plant stress-regulated regulatory element, operatively linked to a reporter molecule can be used to confirm

that the transcription factor is specific for the plant stress-regulated regulatory element. A polynucleotide encoding such a transcription factor also can be obtained.

The present invention also relates to a method of using a polynucleotide portion of a plant stress-regulated gene to confer a selective advantage on a plant cell.

5 In one embodiment, such a method is performed by introducing a plant stress-regulated regulatory element into a plant cell such as those described herein, wherein, upon exposure of the plant cell to a stress condition to which the regulatory element is responsive, a nucleotide sequence operatively linked to the regulatory element is expressed, thereby conferring a selective advantage to plant cell. The operatively

10 linked nucleotide sequence can be, for example, a transcription factor, the expression of which induces the further expression of polynucleotides involved in a stress response, thereby enhancing the response of a plant to the stress condition. In another embodiment, a coding sequence of a plant stress-regulated gene as disclosed herein is introduced into the cell, thereby providing the plant with a selective advantage in

15 response to a stress condition. In still another embodiment, the method results in the knock-out of a plant stress-regulated gene as disclosed herein in a first population of plants, thereby providing a selective advantage to a stress condition in a second population of plants.

The invention further relates to a method of identifying an agent that

20 modulates the activity of a stress-regulated regulatory element of a plant. In a particular embodiment, is provided a method for identifying an agent that alters the activity of an abiotic stress responsive regulatory element comprising contacting the agent or a composition containing an agent to be tested with at least one abiotic stress responsive regulatory element, preferably selected from the group consisting of SEQ

25 ID NOS:2704-5379 (see Table 2), and determining the effect of the agent on the ability of the regulatory sequence to regulate transcription. In further embodiments, the regulatory elements are associated with particular stresses or combination of stresses such as cold stress (SEQ ID NOS:2704-3955), osmotic stress (SEQ ID NOS:5108-5263), saline stress (SEQ ID NOS:4910-5107), a combination of cold and

30 osmotic stress (SEQ ID NOS:4389-4654), a combination of cold and saline stress (SEQ ID NOS:4655-4909), a combination of osmotic and saline stress (SEQ ID NOS:5264-5379), or a combination of cold, osmotic and saline stress (SEQ ID

NOS:3956-4388). In one embodiment, the regulatory element can be operatively linked to a heterologous polynucleotide encoding a reporter molecule, and an agent that modulates the activity of the stress-regulated regulatory element can be identified by detecting a change in expression of the reporter molecule due to contacting the regulatory element with the agent. Such a method can be performed *in vitro* in a plant cell-free system, or in a plant cell in culture or in a plant *in situ*. In another embodiment, the agent is contacted with a transgenic plant containing an introduced plant stress-regulated regulatory element, and an agent that modulates the activity of the regulatory element is identified by detecting a phenotypic change in the transgenic plant. The methods of the invention can be performed in the presence or absence of the stress condition to which the particularly regulatory element is responsive.

Another aspect provides a method for identifying an agent that alters abiotic stress responsive polynucleotide expression in a plant or plant cell comprising contacting a plant or plant cell with a test agent; subjecting the plant cell or plant cell to an abiotic stress or combination of stresses before, during or after contact with the agent to be tested; obtaining an expression profile of the plant or plant cell and comparing the expression profile of the plant or plant cell to an expression profile from a plant or plant cell not exposed to the abiotic stress or combination of stresses. In one embodiment, the expression profile comprises expression data for at least one nucleotide sequence comprising any of SEQ ID NOS:1-5379 (see Tables 1 and 2). In additional embodiments, the expression profile comprises expression data for at least one, and preferably two or more sequences associated with a particular abiotic stress or combination of stresses such as cold stress (SEQ ID NOS:1-1261 and 2704-3955), osmotic stress (SEQ ID NOS:2428-2585 and 5108-5263), saline stress (SEQ ID NOS:2227-2427 and 4910-5107), a combination of cold and osmotic stress (SEQ ID NOS:1699-1969 and 4389-4654), a combination of cold and saline stress (SEQ ID NOS:1970-2226 and 4655-4909), a combination of osmotic and saline stress (SEQ ID NOS:2586-2703 and 5264-5379), or a combination of cold, osmotic and saline stress (SEQ ID NOS:1262-1698 and 3956-4388).

Still another aspect provides nucleotide probes useful for detecting an abiotic stress response in plants, the probes comprising a nucleotide sequence of at least 15, 25, 50 or 100 nucleotides that hybridizes under stringent, preferably highly stringent,

conditions to at least one sequence comprising any of SEQ ID NOS:1-2703. Also provided are nucleotide probes comprising at least 15, 25, 50 or 100 nucleotides in length that hybridize under stringent, preferably highly stringent conditions, to at least one gene associated with a particular stress or combination of stresses, for example
5 cold stress, (SEQ ID NOS:1-1261), osmotic stress (SEQ ID NOS:2428-2585), saline stress (SEQ ID NOS:2227-2427), a combination of cold and osmotic stress (SEQ ID NOS:1699-1969), a combination of cold and saline stress (SEQ ID NOS:1970-2226), a combination of osmotic and saline stress (SEQ ID NOS:2586-2703), or a combination of cold, osmotic, and saline stress (SEQ ID NOS:1262-1698).

10 An additional aspect provides a method for marker-assisted breeding to select plants having an altered resistance to abiotic stress comprising obtaining nucleic acid molecules from the plants to be selected; contacting the nucleic acid molecules with one or more probes that selectively hybridize under stringent, preferably highly stringent, conditions to a nucleic acid sequence selected from the group consisting of
15 SEQ ID NOS:1-2703; detecting the hybridization of the one or more probes to the nucleic acid sequences wherein the presence of the hybridization indicates the presence of a gene associated with altered resistance to abiotic stress; and selecting plants on the basis of the presence or absence of such hybridization. Marker-assisted selection can also be accomplished using one or more probes which selectively
20 hybridize under stringent, preferably highly stringent conditions, to a nucleotide sequence comprising a polynucleotide expressed in response associated with a particular stress, for example, a nucleotide sequence comprising any of SEQ ID NOS:1-1261 (cold stress), SEQ ID NOS:2428-2585 (osmotic stress), SEQ ID NOS:2227-2427 (saline stress), SEQ ID NOS:1699-1969 (cold and osmotic stress),
25 SEQ ID NOS:1970-2226 (cold and saline stress), SEQ ID NOS:2586-2703 (osmotic and saline stress), or SEQ ID NOS:1262-1698 (cold, osmotic and saline stress). In each case marker-assisted selection can be accomplished using a probe or probes to a single sequence or multiple sequences. If multiple sequences are used they can be used simultaneously or sequentially.

30 A further aspect provides a method for monitoring a population of plants comprising providing at least one sentinel plant containing a recombinant polynucleotide comprising a stress responsive regulatory sequence selected from the

group consisting of SEQ ID NOS:2704-5379 which is operatively linked to a nucleotide sequence encoding a detectable marker, for example a fluorescent protein. Additional aspects provide the use of various regulatory sequences including those associated with cold stress (SEQ ID NOS:2704-3955), osmotic stress (SEQ ID NOS:5108-5263), saline stress (SEQ ID NOS:4910-5107), cold and osmotic stress (SEQ ID NOS:4389-4654), cold and saline stress (SEQ ID NOS:4655-4909), osmotic and saline stress (SEQ ID NOS:5264-5379), and cold, osmotic and saline stress (SEQ ID NOS:3956-4388), or fragments thereof wherein such fragments can alter transcription of an operatively linked nucleotide sequence in response to an abiotic stress.

A further aspect provides a computer readable medium having stored thereon computer executable instructions for performing a method comprising receiving data on gene expression in a test plant of at least one nucleic acid molecule having at least 70%, preferably at least 80%, more preferably at least 90%, and most preferably at least 95% nucleotide sequence identity to one or more polynucleotide sequences as set forth in any of SEQ ID NOS:1-2703; and comparing expression data from the test plant to expression data for the same polynucleotide sequence or sequences in a plant that has been exposed to at least one abiotic stress.

Yet a further aspect provides a computer readable medium having stored thereon a data structure comprising, sequence data for at least one, and preferably a plurality of nucleic acid molecules having at least 70%, preferably at least 80%, more preferably at least 90%, and most preferably at least 95% nucleotide sequence identity to a polynucleotide comprising any of SEQ ID NOS:1-2703, or the complement thereof; and a module receiving the nucleic acid molecule sequence data which compares the nucleic acid molecule sequence data to at least one other nucleic acid sequence.

DETAILED DESCRIPTION OF THE INVENTION

The present invention relates to clusters of genes that are induced in response to one or a combination of abiotic stress conditions. Abiotic stress conditions, such as a shortage or excess of solar energy, water and nutrients, and salinity, high and low temperature, or pollution (e.g., heavy metals), can have a major impact on plant growth and can significantly reduce the yield, for example, of cultivars. Under

conditions of abiotic stress, the growth of plant cells is inhibited by arresting the cell cycle in late G1, before DNA synthesis, or at the G2/M boundary (see Dudits, Plant Cell Division, Portland Press Research, Monograph; Francis, Dudits, and Inze, eds., 1997; chap. 2, page 21; Bergounioux, Protoplasma 142:127-136, 1988). The

- 5 identification of stress-regulated gene clusters, using microarray technology, provides a means to identify plant stress-regulated genes.

As used herein, the term "cluster," when used in reference to stress-regulated genes, refers to nucleotide sequences of genes that have been selected by drawing Venn diagrams, and selecting those genes that are regulated only by a selected stress condition.

- 10 In general, a cluster of stress-regulated genes includes at least 5, 10, 15, or 20 genes, including polynucleotide portions thereof, each of which is responsive to the same selected stress condition or conditions. The selected stress condition can be a single stress condition, for example, cold, osmotic stress or salinity stress (see Tables 3-14), or can be a selected combination of stress conditions, for example, cold, osmotic stress and
- 15 salinity stress (see Tables 15-26). In addition, a cluster can be selected based on specifying that all of the genes are coordinately regulated, for example, they all start at a low level and are induced to a higher level. However, a cluster of saline stress-regulated genes, for example, that was selected for coordinate regulation from low to high, also can be decreased in response to cold or mannitol. By varying the parameters used for
- 20 selecting a cluster of gene nucleotide sequences, those genes that are expressed in a specific manner following a stress can be identified.

- As used herein in reference to a polynucleotide or polynucleotide portion of a gene or nucleic acid molecule, the term "isolated" means a polynucleotide, polynucleotide portion of a gene, or nucleic acid molecule that is free of one or both
- 25 of the nucleotide sequences that normally flank the polynucleotide in a genome of a naturally-occurring organism from which the polynucleotide is derived. The term includes, for example, a polynucleotide or fragment thereof that is incorporated into a vector or expression cassette; into an autonomously replicating plasmid or virus; into the genomic DNA of a prokaryote or eukaryote; or that exists as a separate molecule
- 30 independent of other polynucleotides. It also includes a recombinant polynucleotide that is part of a hybrid polynucleotide, for example, one encoding a polypeptide sequence.

The terms "polynucleotide," "oligonucleotide," and "nucleic acid sequence" are used interchangeably herein to refer to a polymeric (2 or more monomers) form of nucleotides of any length, either ribonucleotides or deoxyribonucleotides. Although nucleotides are usually joined by phosphodiester linkages, the term also includes
5 polymers containing neutral amide backbone linkages composed of aminoethyl glycine units. The terms are used only to refer to the primary structure of the molecule. Thus, the term includes double stranded and single stranded DNA molecules, including a sense strand or an antisense strand, and RNA molecules as well as genomic DNA, cDNA, mRNA and the like. It will be recognized that such
10 polynucleotides can be modified, for example, by including a label such as a radioactive, fluorescent or other tag, by methylation, by the inclusion of a cap structure, by containing a substitution of one or more of the naturally occurring nucleotides with a nucleotide analog, by containing an internucleotide modification such as having uncharged linkages (e.g., methyl phosphonates, phosphotriesters,
15 phosphoramidates, carbamates, or the like), by containing a pendant moiety such as a protein (e.g., a nuclease, toxin, antibody, signal peptide, poly-L-lysine, or the like), by containing an intercalator such as acridine or psoralen, by containing a chelator, which can be a metal such as boron, an oxidative metal, or a radioactive metal, by containing an alkylator, or by having a modified linkage (e.g., an alpha anomeric
20 nucleic acid).

The term "recombinant nucleic acid molecule" refers to a polynucleotide produced by human intervention. A recombinant nucleic acid molecule can contain two or more nucleotide sequences that are linked in a manner such that the product is not found in a cell in nature. In particular, the two or more nucleotide sequences can
25 be operatively linked and, for example, can encode a fusion polypeptide, or can comprise a nucleotide sequence and a regulatory element. A recombinant nucleic acid molecule also can be based on, but different, from a naturally occurring polynucleotide, for example, a polynucleotide having one or more nucleotide changes such that a first codon, which normally is found in the polynucleotide, is replaced
30 with a degenerate codon that encodes the same or a conservative amino acid, or such that a sequence of interest is introduced into the polynucleotide, for example, a

restriction endonuclease recognition site or a splice site, a promoter, a DNA replication initiation site, or the like.

As used herein, the term "abiotic stress" or "abiotic stress condition" refers to the exposure of a plant, plant cell, or the like, to a non-living ("abiotic") physical or chemical agent or condition that has an adverse effect on metabolism, growth, development, propagation and/or survival of the plant (collectively "growth"). An abiotic stress can be imposed on a plant due, for example, to an environmental factor such as water (e.g., flooding, drought, dehydration), anaerobic conditions (e.g., a low level of oxygen), abnormal osmotic conditions, salinity or temperature (e.g., hot/heat, cold, freezing, frost), a deficiency of nutrients or exposure to pollutants, or by a hormone, second messenger or other molecule. Anaerobic stress, for example, is due to a reduction in oxygen levels (hypoxia or anoxia) sufficient to produce a stress response. A flooding stress can be due to prolonged or transient immersion of a plant, plant part, tissue or isolated cell in a liquid medium such as occurs during monsoon, wet season, flash flooding or excessive irrigation of plants, or the like. A cold stress or heat stress can occur due to a decrease or increase, respectively, in the temperature from the optimum range of growth temperatures for a particular plant species. Such optimum growth temperature ranges are readily determined or known to those skilled in the art. Dehydration stress can be induced by the loss of water, reduced turgor, or reduced water content of a cell, tissue, organ or whole plant. Drought stress can be induced by or associated with the deprivation of water or reduced supply of water to a cell, tissue, organ or organism. Saline stress (salt stress) can be associated with or induced by a perturbation in the osmotic potential of the intracellular or extracellular environment of a cell. Osmotic stress also can be associated with or induced by a change, for example, in the concentration of molecules in the intracellular or extracellular environment of a plant cell, particularly where the molecules cannot be partitioned across the plant cell membrane.

As disclosed herein, clusters of plant stress-regulated genes (Example 1; see, also, Tables 1-31) and homologs and orthologs thereof (Table 32) have been identified. Remarkably, several of the stress-regulated genes previously were known to encode polypeptides having defined cellular functions, including roles as transcription factors, enzymes such as kinases, and structural proteins such as channel proteins (see

Tables 29-31). The identification of *Arabidopsis* stress-regulated genes provides a means to identify homologous and orthologous genes and gene sequences in other plant species using well known procedures and algorithms based on identity (or homology) to the disclosed sequences. Thus, the invention provides polynucleotide sequences comprising plant stress-regulated genes that are homologs or orthologs, variants, or otherwise substantially similar to the polynucleotides disclosed herein, and having an E value $\leq 1 \times 10^{-8}$, which can be identified, for example, by a BLASTN search using the *Arabidopsis* polynucleotides of Tables 1 and 2 (SEQ ID NOS:1-5379) as query sequences (see Table 32).

A polynucleotide sequence of a stress-regulated gene as disclosed herein can be particularly useful for performing the methods of the invention on a variety of plants, including but not limited to, corn (*Zea mays*), *Brassica* sp. (e.g., *B. napus*, *B. rapa*, *B. juncea*), particularly those *Brassica* species useful as sources of seed oil, alfalfa (*Medicago sativa*), rice (*Oryza sativa*), rye (*Secale cereale*), sorghum (*Sorghum bicolor*, *Sorghum vulgare*), millet (e.g., pearl millet (*Pennisetum glaucum*), proso millet (*Panicum miliaceum*), foxtail millet (*Setaria italica*), finger millet (*Eleusine coracana*)), sunflower (*Helianthus annuus*), safflower (*Carthamus tinctorius*), wheat (*Triticum aestivum*), soybean (*Glycine max*), tobacco (*Nicotiana tabacum*), potato (*Solanum tuberosum*), peanuts (*Arachis hypogaea*), cotton (*Gossypium barbadense*, *Gossypium hirsutum*), sweet potato (*Ipomoea batatas*), cassava (*Manihot esculenta*), coffee (*Cofea* spp.), coconut (*Cocos nucifera*), pineapple (*Ananas comosus*), citrus trees (*Citrus* spp.), cocoa (*Theobroma cacao*), tea (*Camellia sinensis*), banana (*Musa* spp.), avocado (*Persea utilane*), fig (*Ficus casica*), guava (*Psidium guajava*), mango (*Mangifera indica*), olive (*Olea europaea*), papaya (*Carica papaya*), cashew (*Anacardium occidentale*), macadamia (*Macadamia integrifolia*), almond (*Prunus amygdalus*), sugar beets (*Beta vulgaris*), sugarcane (*Saccharum* spp.), oats, duckweed (*Lemna*), barley, tomatoes (*Lycopersicon esculentum*), lettuce (e.g., *Lactuca sativa*), green beans (*Phaseolus vulgaris*), lima beans (*Phaseolus limensis*), peas (*Lathyrus* spp.), and members of the genus *Cucumis* such as cucumber (*C. sativus*), cantaloupe (*C. cantalupensis*), and musk melon (*C. melo*). Ornamentals such as azalea (*Rhododendron* spp.), hydrangea (*Macrophylla hydrangea*), hibiscus (*Hibiscus rosasanensis*), roses (*Rosa* spp.), tulips (*Tulipa* spp.),

- daffodils (*Narcissus* spp.), petunias (*Petunia hybrida*), carnation (*Dianthus caryophyllus*), poinsettia (*Euphorbia pulcherrima*), and chrysanthemum are also included. Additional ornamentals within the scope of the invention include impatiens, Begonia, Pelargonium, Viola, Cyclamen, Verbena, Vinca, Tagetes, Primula, Saint
- 5 Paulia, Agertum, Amaranthus, Antihirrhinum, Aquilegia, Cineraria, Clover, Cosmo, Cowpea, Dahlia, Datura, Delphinium, Gerbera, Gladiolus, Gloxinia, Hippeastrum, Mesembryanthemum, Salpiglossos, and Zinnia. Conifers that may be employed in practicing the present invention include, for example, pines such as loblolly pine (*Pinus taeda*), slash pine (*Pinus elliotii*), ponderosa pine (*Pinus ponderosa*),
- 10 lodgepole pine (*Pinus contorta*), and Monterey pine (*Pinus radiata*), Douglas-fir (*Pseudotsuga menziesii*); Western hemlock (*Tsuga utilane*); Sitka spruce (*Picea glauca*); redwood (*Sequoia sempervirens*); true firs such as silver fir (*Abies amabilis*) and balsam fir (*Abies balsamea*); and cedars such as Western red cedar (*Thuja plicata*) and Alaska yellow-cedar (*Chamaecyparis nootkatensis*).
- 15 Leguminous plants which may be used in the practice of the present invention include beans and peas. Beans include guar, locust bean, fenugreek, soybean, garden beans, cowpea, mung bean, lima bean, fava bean, lentils, chickpea, etc. Legumes include, but are not limited to, *Arachis*, e.g., peanuts, *Vicia*, e.g., crown vetch, hairy vetch, adzuki bean, mung bean, and chickpea, *Lupinus*, e.g., lupine, trifolium,
- 20 *Phaseolus*, e.g., common bean and lima bean, *Pisum*, e.g., field bean, *Melilotus*, e.g., clover, *Medicago*, e.g., alfalfa, Lotus, e.g., trefoil, lens, e.g., lentil, and false indigo. Preferred forage and turf grass for use in the methods of the invention include alfalfa, orchard grass, tall fescue, perennial ryegrass, creeping bent grass, and redtop.
- Other plants within the scope of the invention include *Acacia*, aneth,
- 25 artichoke, arugula, blackberry, canola, cilantro, clementines, escarole, eucalyptus, fennel, grapefruit, honey dew, jicama, kiwifruit, lemon, lime, mushroom, nut, okra, orange, parsley, persimmon, plantain, pomegranate, poplar, radiata pine, radicchio, Southern pine, sweetgum, tangerine, triticale, vine, yams, apple, pear, quince, cherry, apricot, melon, hemp, buckwheat, grape, raspberry, chenopodium, blueberry,
- 30 nectarine, peach, plum, strawberry, watermelon, eggplant, pepper, cauliflower, Brassica, e.g., broccoli, cabbage, ultilan sprouts, onion, carrot, leek, beet, broad bean,

celery, radish, pumpkin, endive, gourd, garlic, snapbean, spinach, squash, turnip, utilane, chicory, groundnut and zucchini.

As used herein, the term "substantially similar", when used herein with respect to a nucleotide sequence, means a nucleotide sequence corresponding to a reference
5 nucleotide sequence, wherein the corresponding sequence encodes a polypeptide or comprises a regulatory element having substantially the same structure and function as the polypeptide encoded by the reference nucleotide sequence, for example, where only changes in amino acids not affecting the polypeptide function occur. For purposes of the present invention, a reference (or query) sequence is a polynucleotide
10 sequence as set forth in any of SEQ ID NOS:1-2703 or a polypeptide encoded thereby. Desirably, a substantially similar nucleotide sequence encodes the polypeptide encoded by the reference nucleotide sequence. The percentage of identity between the substantially similar nucleotide sequence and the reference nucleotide sequence desirably is at least 60%, more desirably at least 75%, preferably at least
15 90%, more preferably at least 95%, still more preferably at least 99% and including 100%. A nucleotide sequence is "substantially similar" to reference nucleotide sequence hybridizes to the reference nucleotide sequence in 7% sodium dodecyl sulfate (SDS), 0.5 M NaPO₄, 1 mM EDTA at 50°C with washing in 2X SSC, 0.1% SDS at 50°C, more desirably in 7% sodium dodecyl sulfate (SDS),
20 0.5 M NaPO₄, 1 mM EDTA at 50°C with washing in 1X SSC, 0.1% SDS at 50°C (stringent conditions), more desirably still in 7% sodium dodecyl sulfate (SDS), 0.5 M NaPO₄, 1 mM EDTA at 50°C with washing in 0.5X SSC, 0.1% SDS at 50°C (high stringency), preferably in 7% sodium dodecyl sulfate (SDS), 0.5 M NaPO₄, 1 mM EDTA at 50°C with washing in 0.1X SSC, 0.1% SDS at 50°C (very high
25 stringency), more preferably in 7% sodium dodecyl sulfate (SDS), 0.5 M NaPO₄, 1 mM EDTA at 50°C with washing in 0.1X SSC, 0.1% SDS at 65°C (extremely high stringency).

In addition, the term "substantially similar," when used in reference to a polypeptide sequence, means that an amino acid sequence relative to a reference (query)
30 sequence shares at least about 65% amino acid sequence identity, particularly at least about 75% amino acid sequence identity, and preferably at least about 85%, more

preferably at least about 90% , and most preferably at least about 95% or greater amino acid sequence identity. Generally, sequences having an $E \leq 10^{-8}$ are considered to be substantially similar to a query sequence. Such sequence identity can take into account conservative amino acid changes that do not substantially affect the function of a polypeptide. As such, homologs or orthologs of the *Arabidopsis* stress-regulated nucleotide sequences disclosed herein, variants thereof, and polypeptides substantially similar to the polynucleotide sequence of *Arabidopsis* stress-regulated genes set forth in SEQ ID NOS:1-5379 are encompassed within the present invention and, therefore, useful for practicing the methods of the invention (see, for example, Table 32).

Homology or identity is often measured using sequence analysis software such as the Sequence Analysis Software Package of the Genetics Computer Group (University of Wisconsin Biotechnology Center, 1710 University Avenue, Madison, WI 53705). Such software matches similar sequences by assigning degrees of homology to various deletions, substitutions and other modifications. The terms "homology" and "identity," when used herein in the context of two or more nucleic acids or polypeptide sequences, refer to two or more sequences or subsequences that are the same or have a specified percentage of amino acid residues or of nucleotides that are the same when compared and aligned for maximum correspondence over a comparison window or designated region as measured using any number of sequence comparison algorithms or by manual alignment and visual inspection.

For sequence comparison, typically one sequence acts as a reference sequence, to which test sequences are compared. When using a sequence comparison algorithm, test and reference sequences are entered into a computer, subsequence coordinates are designated, if necessary, and sequence algorithm program parameters are designated. Default program parameters can be used, or alternative parameters can be designated. The sequence comparison algorithm then calculates the percent sequence identities for the test sequences relative to the reference sequence, based on the program parameters.

The term "comparison window" is used broadly herein to include reference to a segment of any one of the number of contiguous positions, for example, about 20 to 600 positions, for example, amino acid or nucleotide position, usually about 50 to about 200 positions, more usually about 100 to about 150 positions, in which a sequence may be compared to a reference sequence of the same number of contiguous positions

after the two sequences are optimally aligned. Methods of alignment of sequence for comparison are well-known in the art. Optimal alignment of sequences for comparison can be conducted, for example, by the local homology algorithm of Smith and Waterman (Adv. Appl. Math. 2:482, 1981), by the homology alignment algorithm of Needleman and Wunsch (J. Mol. Biol. 48:443, 1970), by the search for similarity method of Person and Lipman (Proc. Natl. Acad. Sci., USA 85:2444, 1988), each of which is incorporated herein by reference; by computerized implementations of these algorithms (GAP, BESTFIT, FASTA, and TFASTA in the Wisconsin Genetics Software Package, Genetics Computer Group, 575 Science Dr., Madison, WI); or by manual alignment and visual inspection. Other algorithms for determining homology or identity include, for example, in addition to a BLAST program (Basic Local Alignment Search Tool at the National Center for Biological Information), ALIGN, AMAS (Analysis of Multiply Aligned Sequences), AMPS (Protein Multiple Sequence Alignment), ASSET (Aligned Segment Statistical Evaluation Tool), BANDS, BESTSCOR, BIOSCAN (Biological Sequence Comparative Analysis Node), BLIMPS (BLOCKS IMPROVED Searcher), FASTA, Intervals & Points, BMB, CLUSTAL V, CLUSTAL W, CONSENSUS, LCONSENSUS, WCONSENSUS, Smith-Waterman algorithm, DARWIN, Las Vegas algorithm, FNAT (Forced Nucleotide Alignment Tool), Framealign, Framesearch, DYNAMIC, FILTER, FSAP (Fristensky Sequence Analysis Package), GAP (Global Alignment Program), GENAL, GIBBS, GenQuest, ISSC (Sensitive Sequence Comparison), LALIGN (Local Sequence Alignment), LCP (Local Content Program), MACAW (Multiple Alignment Construction & Analysis Workbench), MAP (Multiple Alignment Program), MBLKP, MBLKN, PIMA (Pattern-Induced Multi-sequence Alignment), SAGA (Sequence Alignment by Genetic Algorithm) and WHAT-IF. Such alignment programs can also be used to screen genome databases to identify polynucleotide sequences having substantially identical sequences.

A number of genome databases are available for comparison. Several databases containing genomic information annotated with some functional information are maintained by different organizations, and are accessible via the internet, for example, at world wide web addresses (url's) "www.tigr.org/tdb"; "genetics.wisc.edu";

"genome-www.stanford.edu/~ball"; "hiv-web.lanl.gov"; "ncbi.nlm.nih.gov"; "ebi.ac.uk"; "Pasteur.fr/other/biology"; and "genome.wi.mit.edu".

In particular, the BLAST and BLAST 2.0 algorithms using default parameters are particularly useful for identifying polynucleotide and polypeptides encompassed within the present invention (Altschul et al. (Nucleic Acids Res. 25:3389-3402, 1977; J. Mol. Biol. 215:403-410, 1990, each of which is incorporated herein by reference). Software for performing BLAST analyses is publicly available through the National Center for Biotechnology Information (<http://www.ncbi.nlm.nih.gov>). This algorithm involves first identifying high scoring sequence pairs (HSPs) by identifying short words of length W in the query sequence, which either match or satisfy some positive-valued threshold score T when aligned with a word of the same length in a database sequence. T is referred to as the neighborhood word score threshold (Altschul et al., *supra*, 1977, 1990). These initial neighborhood word hits act as seeds for initiating searches to find longer HSPs containing them. The word hits are extended in both directions along each sequence for as far as the cumulative alignment score can be increased. Cumulative scores are calculated using, for nucleotide sequences, the parameters M (reward score for a pair of matching residues; always >0). For amino acid sequences, a scoring matrix is used to calculate the cumulative score. Extension of the word hits in each direction are halted when: the cumulative alignment score falls off by the quantity X from its maximum achieved value; the cumulative score goes to zero or below, due to the accumulation of one or more negative-scoring residue alignments; or the end of either sequence is reached. The BLAST algorithm parameters W, T, and X determine the sensitivity and speed of the alignment. The BLASTN program (for nucleotide sequences) uses as defaults a wordlength (W) of 11, an expectation (E) of 10, M=5, N=4 and a comparison of both strands. For amino acid sequences, the BLASTP program uses as defaults a wordlength of 3, and expectations (E) of 10, and the BLOSUM62 scoring matrix (see Henikoff and Henikoff, Proc. Natl. Acad. Sci., USA 89:10915, 1989) alignments (B) of 50, expectation (E) of 10, M=5, N=4, and a comparison of both strands.

The BLAST algorithm also performs a statistical analysis of the similarity between two sequences (see, for example, Karlin and Altschul, Proc. Natl. Acad. Sci., USA 90:5873, 1993, which is incorporated herein by reference). One measure of

similarity provided by BLAST algorithm is the smallest sum probability ($P(N)$), which provides an indication of the probability by which a match between two nucleotide or amino acid sequences would occur by chance. For example, a nucleic acid is considered similar to a references sequence if the smallest sum probability in a comparison of the test nucleic acid to the reference nucleic acid is less than about 0.2, more preferably less than about 0.01, and most preferably less than about 0.001. Significantly, upon identifying polynucleotides that are substantially similar to those of SEQ ID NOS:1-5379, the identified polynucleotides can be used as query sequences in a BLAST search to identify polynucleotides and polypeptides substantially similar thereto.

It should be noted that the nucleotide sequences set forth as SEQ ID NOS:1-2703 comprise coding sequences, whereas the nucleotide sequences set forth as SEQ ID NOS:2704-5379 comprise regulatory sequences. In addition, the coding sequences and regulatory sequences are related in that, for example, SEQ ID NO:1 is the coding sequence of a plant cold regulated gene having a 5' upstream (regulatory) sequence set forth as SEQ ID NO:2704 (see Table 2). Similarly, SEQ ID NO:2705 comprises a regulatory region of SEQ ID NO:2, SEQ ID NO:2706 comprises a regulatory region of SEQ ID NO:3, and so forth as shown in Table 2. As such, reference herein, for example, to a "polynucleotide comprising SEQ ID NO:1" can, unless indicated otherwise, include at least SEQ ID NO:2704. In some cases, the entire coding region of a plant stress regulated gene or the 5' upstream sequence has not yet been determined (see, for example, SEQ ID NO:43 in Table 3, where "none" indicates that 5' upstream regulatory sequences have not yet been determined). However, the determination of a complete coding sequence where only a portion is known or of regulatory sequences where a portion of the coding sequence is known can be made using methods as disclosed herein or otherwise known in the art.

In one embodiment, protein and nucleic acid sequence homologies are evaluated using the Basic Local Alignment Search Tool ("BLAST"). In particular, five specific BLAST programs are used to perform the following task:

- (1) BLASTP and BLAST3 compare an amino acid query sequence against a protein sequence database;
- (2) BLASTN compares a nucleotide query sequence against a nucleotide sequence database;

(3) BLASTX compares the six-frame conceptual translation products of a query nucleotide sequence (both strands) against a protein sequence database;

(4) TBLASTN compares a query protein sequence against a nucleotide sequence database translated in all six reading frames (both strands); and

5 (5) TBLASTX compares the six-frame translations of a nucleotide query sequence against the six-frame translations of a nucleotide sequence database.

The BLAST programs identify homologous sequences by identifying similar segments, which are referred to herein as "high-scoring segment pairs," between a query amino or nucleic acid sequence and a test sequence which is preferably
10 obtained from a protein or nucleic acid sequence database. High-scoring segment pairs are preferably identified (*i.e.*, aligned) by means of a scoring matrix, many of which are known in the art. Preferably, the scoring matrix used is the BLOSUM62 matrix (Gonnet et al., Science 256:1443-1445, 1992; Henikoff and Henikoff, Proteins 17:49-61, 1993, each of which is incorporated herein by reference). Less preferably,
15 the PAM or PAM250 matrices may also be used (Schwartz and Dayhoff, eds., "Matrices for Detecting Distance Relationships: Atlas of Protein Sequence and Structure" (Washington, National Biomedical Research Foundation 1978)). BLAST programs are accessible through the U.S. National Library of Medicine, for example, on the world wide web at address (url) "ncbi.nlm.nih.gov".

20 The parameters used with the above algorithms may be adapted depending on the sequence length and degree of homology studied. In some embodiments, the parameters may be the default parameters used by the algorithms in the absence of instructions from the user.

The term "substantially similar" also is used in reference to a comparison of
25 expression profiles of nucleotide sequences, wherein a determination that an expression profile characteristic of a stress response is substantially similar to the profile of nucleic acid molecules expressed in a plant cell being examined ("test plant") is indicative of exposure of the test plant cell to one or a combination of abiotic stress conditions. When used in reference to such a comparison of expression profiles, the
30 term "substantially similar" means that that the individual nucleotide sequences in the test plant cell profile are altered in the same manner as the corresponding nucleotide sequences in the expression profile characteristic of the stress response.

By way of example, where exposure to saline results in an increased expression of nucleotide sequences A, B and C, and a decreased expression of nucleotide sequences D and E, as indicated by the expression profile characteristic of a saline stress response, a determination that corresponding nucleotide sequences A, B and C in the test plant cell
5 are increased and that nucleotides sequences D and E are decreased is indicative of exposure of the test plant cell to a saline stress condition. It should be recognized that, where, for example, only nucleotide sequences A, B, D and E are examined in the test plant cell, an increase in A and B and a decrease in D and E expression of the test plant cells is considered to be substantially similar to the expression profile characteristic of a
10 saline stress condition and, therefore, is indicative of exposure of the plant cell to a saline stress condition. Similarly, where the levels of expression of the nucleotide sequences examined in a test plant are altered in the same manner, i.e., are increased or are decreased, as that observed in an expression profile characteristic of a particular stress response, the absolute levels of expression may vary, for example, two-fold, five-fold,
15 ten-fold, or the like. Nevertheless, the expression profile of the test plant cell is considered to be substantially similar to the expression profile characteristic of the particular stress response and, therefore, indicative of exposure of the plant cell to the stress condition.

As disclosed herein, clusters of stress-regulated genes (and their products), some
20 of which also have been described as having cellular functions such as enzymatic activity or roles as transcription factors, are involved in the response of plant cells to various abiotic stresses (see Tables 29-31; see, also, Tables 1 and 32). As such, the polynucleotide sequences comprising the genes in a cluster likely share common stress-regulated regulatory elements, including, for example, cold-regulated regulatory
25 elements (SEQ ID NOS:2704-3955), salinity-regulated regulatory elements (SEQ ID NOS:4910-5107, and osmotic pressure-regulated regulatory elements (SEQ ID NO:5108-5263), as well as regulatory elements that are responsive to a combination of stress conditions, but not to any of the individual stress conditions, alone (SEQ ID
30 NOS:3956-4909 and 5263-5379). The identification of such clusters of genes thus provides a means to identify the stress-regulated regulatory elements that control the level of expression of these genes.

As used herein, the term "plant stress-regulated gene" means a polynucleotide sequence of a plant, the transcription of which is altered in response to exposure to a stress condition, and the regulatory elements linked to such a polynucleotide sequence and involved in the stress response, which can be induction or repression. In general, plant stress gene regulatory elements are contained within a sequence including approximately two kilobases upstream (5') of the transcription or translation start site and two kilobases downstream (3') of the transcription or translation termination site. In the absence of an abiotic stress condition, the stress-regulated gene can normally be unexpressed in the cells, can be expressed at a basal level, which is induced to a higher level in response to the stress condition, or can be expressed at a level that is reduced (decreased) in response to the stress condition. The coding region of a plant stress-regulated gene encodes a stress-regulated polypeptide, and also can be the basis for expression of a functional RNA molecule such as an antisense molecule or ribozyme. A stress-regulated polypeptide can have an adaptive effect on a plant, thereby allowing the plant to better tolerate stress conditions; or can have a maladaptive effect, thereby decreasing the ability of the plant to tolerate the stress conditions.

The present invention provides an isolated plant stress-regulated regulatory element, which regulates expression of an operatively linked nucleotide sequence in a plant in response a stress condition. As disclosed herein, a plant stress-regulated regulatory element can be isolated from a polynucleotide sequence of a plant stress-regulated gene comprising a nucleotide sequence as set forth in SEQ ID NOS:1-2703, for example any of SEQ ID NOS:2704-5379 (see Table 2). It is recognized that certain of the polynucleotides set forth as SEQ ID NOS:1-5379 previously have been described as being involved in a stress-regulated response in plants, including SEQ ID NOS:156, 229, 233, 558, 573, 606, 625, 635, 787, 813, 1263, 1386, 1391, 1405, 1445, 1484, 1589, 1609, 1634, 1726, 1866, 1918, and 1928 and, therefore, are not encompassed, in whole or in part, within the compositions of the invention, and are encompassed within only certain particular methods of the invention, for example, methods of making a transgenic plant that is resistant to two or more stress conditions, since, even where such a gene was known to be expressed in response to a single stress condition such as cold or saline (e.g., SEQ ID NO:1263), it was not known

prior to the present disclosure that any of these genes was responsive to a combination of stress conditions (for example, a combination of cold and osmotic stress for SEQ ID NOS:1726, 1866, 1918, and 1928; or a combination of cold, osmotic and saline stress for SEQ ID NOS:1263,1386, 1391, 1405, 1445, 1484, 1589, 1609, and 1634).

5 Methods for identifying and isolating the stress-regulated regulatory element from the disclosed polynucleotides, or genomic DNA clones corresponding thereto, are well known in the art. For example, methods of making deletion constructs or linker-scanner constructs can be used to identify nucleotide sequences that are responsive to a stress condition. Generally, such constructs include a reporter gene
10 operatively linked to the sequence to be examined for regulatory activity. By performing such assays, a plant stress-regulated regulatory element can be defined within a sequence of about 500 nucleotides or fewer, generally at least about 200 nucleotides or fewer, particularly about 50 to 100 nucleotides, and more particularly at least about 20 nucleotides or fewer. Preferably the minimal (core)
15 sequence required for regulating a stress response of a plant is identified.

 The nucleotide sequences of the genes of a cluster also can be examined using a homology search engine such as described herein to identify sequences of conserved identity, particularly in the nucleotide sequence upstream of the transcription start site. Since all of the genes in a cluster as disclosed are induced in response to a
20 particular stress condition or a particular combination of stress conditions, some or all of the nucleotide sequences can share conserved stress-regulated regulatory elements. By performing such a homology search, putative stress-regulated regulatory elements can be identified. The ability of such identified sequences to function as a plant stress-regulated regulatory element can be confirmed, for example, by operatively
25 linking the sequence to a reporter gene and assaying the construct for responsiveness to a stress condition.

 As used herein, the term "regulatory element" means a nucleotide sequence that, when operatively linked to a coding region of a gene, effects transcription of the coding region such that a ribonucleic acid (RNA) molecule is transcribed from the
30 coding region. A regulatory element generally can increase or decrease the amount of transcription of a nucleotide sequence, for example, a coding sequence, operatively linked to the element with respect to the level at which the nucleotide sequence would

be transcribed absent the regulatory element. Regulatory elements are well known in the art and include promoters, enhancers, silencers, inactivated silencer intron sequences, 3'-untranslated or 5'-untranslated sequences of transcribed sequence, for example, a poly-A signal sequence, or other protein or RNA stabilizing elements, or
5 other gene expression control elements known to regulate gene expression or the amount of expression of a gene product. A regulatory element can be isolated from a naturally occurring genomic DNA sequence or can be synthetic, for example, a synthetic promoter.

Regulatory elements can be constitutively expressed regulatory element,
10 which maintain gene expression at a relative level of activity (basal level), or can be regulated regulatory elements. Constitutively expressed regulatory elements can be expressed in any cell type, or can be tissue specific, which are expressed only in particular cell types, phase specific, which are expressed only during particular developmental or growth stages of a plant cell, or the like. A regulatory element such
15 as a tissue specific or phase specific regulatory element or an inducible regulatory element useful in constructing a recombinant polynucleotide or in practicing a method of the invention can be a regulatory element that generally, in nature, is found in a plant genome. However, the regulatory element also can be from an organism other than a plant, including, for example, from a plant virus, an animal virus, or a cell
20 from an animal or other multicellular organism.

A regulatory element useful for practicing method of the present is a promoter element. Useful promoters include, but are not limited to, constitutive, inducible, temporally regulated, developmentally regulated, spatially-regulated, chemically regulated, stress-responsive, tissue-specific, viral and synthetic promoters. Promoter
25 sequences are known to be strong or weak. A strong promoter provides for a high level of gene expression, whereas a weak promoter provides for a very low level of gene expression. An inducible promoter is a promoter that provides for the turning on and off of gene expression in response to an exogenously added agent, or to an environmental or developmental stimulus. A bacterial promoter such as the P_{tac}
30 promoter can be induced to varying levels of gene expression depending on the level of isothiopyl galactoside added to the transformed bacterial cells. An isolated promoter sequence that is a strong promoter for heterologous nucleic acid is

advantageous because it provides for a sufficient level of gene expression to allow for easy detection and selection of transformed cells and provides for a high level of gene expression when desired.

Within a plant promoter region there are several domains that are necessary
5 for full function of the promoter. The first of these domains lies immediately upstream of the structural gene and forms the "core promoter region" containing consensus sequences, normally 70 base pairs immediately upstream of the gene. The core promoter region contains the characteristic CAAT and TATA boxes plus surrounding sequences, and represents a transcription initiation sequence that defines
10 the transcription start point for the structural gene.

The presence of the core promoter region defines a sequence as being a promoter: if the region is absent, the promoter is non-functional. The core promoter region, however, is insufficient to provide full promoter activity. A series of regulatory sequences upstream of the core constitute the remainder of the promoter.
15 These regulatory sequences determine expression level, the spatial and temporal pattern of expression and, for an important subset of promoters, expression under inductive conditions (regulation by external factors such as light, temperature, chemicals, hormones).

To define a minimal promoter region, a DNA segment representing the
20 promoter region is removed from the 5' region of the gene of interest and operably linked to the coding sequence of a marker (reporter) gene by recombinant DNA techniques well known to the art. The reporter gene is operably linked downstream of the promoter, so that transcripts initiating at the promoter proceed through the reporter gene. Reporter genes generally encode proteins which are easily measured, including,
25 but not limited to, chloramphenicol acetyl transferase (CAT), beta-glucuronidase (GUS), green fluorescent protein (GFP), β -galactosidase (β -GAL), and luciferase.

The construct containing the reporter gene under the control of the promoter is then introduced into an appropriate cell type by transfection techniques well known to the art. To assay for the reporter protein, cell lysates are prepared and appropriate
30 assays, which are well known in the art, for the reporter protein are performed. For example, if CAT were the reporter gene of choice, the lysates from cells transfected with constructs containing CAT under the control of a promoter under study are

mixed with isotopically labeled chloramphenicol and acetyl-coenzyme A (acetyl-CoA). The CAT enzyme transfers the acetyl group from acetyl-CoA to the 2-position or 3-position of chloramphenicol. The reaction is monitored by thin layer chromatography, which separates acetylated chloramphenicol from unreacted material. The reaction products are then visualized by autoradiography.

The level of enzyme activity corresponds to the amount of enzyme that was made, which in turn reveals the level of expression from the promoter of interest. This level of expression can be compared to other promoters to determine the relative strength of the promoter under study. In order to be sure that the level of expression is determined by the promoter, rather than by the stability of the mRNA, the level of the reporter mRNA can be measured directly, for example, by northern blot analysis. Once activity is detected, mutational and/or deletional analyses may be employed to determine the minimal region and/or sequences required to initiate transcription. Thus, sequences can be deleted at the 5' end of the promoter region and/or at the 3' end of the promoter region, and nucleotide substitutions introduced. These constructs are then introduced to cells and their activity determined.

The choice of promoter will vary depending on the temporal and spatial requirements for expression, and also depending on the target species. In some cases, expression in multiple tissues is desirable. While in others, tissue-specific, e.g., leaf-specific, seed-specific, petal-specific, anther-specific, or pith-specific, expression is desirable. Although many promoters from dicotyledons have been shown to be operational in monocotyledons and *vice versa*, ideally dicotyledonous promoters are selected for expression in dicotyledons, and monocotyledonous promoters for expression in monocotyledons. There is, however, no restriction to the origin or source of a selected promoter. It is sufficient that the promoters are operational in driving the expression of a desired nucleotide sequence in the particular cell.

A range of naturally-occurring promoters are known to be operative in plants and have been used to drive the expression of heterologous (both foreign and endogenous) genes and nucleotide sequences in plants: for example, the constitutive 35S cauliflower mosaic virus (CaMV) promoter, the ripening-enhanced tomato polygalacturonase promoter (Bird et al., 1988), the E8 promoter (Diekmann and Fischer, 1988) and the fruit specific 2A1 promoter (Pear et al., 1989). Many other

promoters, e.g., U2 and U5 snRNA promoters from maize, the promoter from alcohol dehydrogenase, the Z4 promoter from a gene encoding the Z4 22 kD zein protein, the Z10 promoter from a gene encoding a 10 kD zein protein, a Z27 promoter from a gene encoding a 27 kD zein protein, the A20 promoter from the gene encoding a 19 kD zein protein, inducible promoters, such as the light inducible promoter derived from the pea *rbcS* gene and the actin promoter from rice, e.g., the actin 2 promoter (WO 00/70067); seed specific promoters, such as the phaseolin promoter from beans, may also be used. The nucleotide sequences of the stress-regulated genes of this invention can also be expressed under the regulation of promoters that are chemically regulated. This enables the nucleic acid sequence or encoded polypeptide to be synthesized only when the crop plants are treated with the inducing chemicals. Chemical induction of gene expression is detailed in EP 0 332 104 and U.S. Pat. 5,614,395.

In some instances it may be desirable to link a constitutive promoter to a polynucleotide comprising a stress regulated gene of the invention. Examples of some constitutive promoters include the rice actin 1 (Wang et al., 1992; U.S. Pat. No. 5,641,876), CaMV 35S (Odell et al., 1985), CaMV 19S (Lawton et al., 1987), *nos*, *Adh*, sucrose synthase; and the ubiquitin promoters.

In other situations it may be desirable to limit expression of stress-related sequences to specific tissues or stages of development. As used herein, the term "tissue specific or phase specific regulatory element" means a nucleotide sequence that effects transcription in only one or a few cell types, or only during one or a few stages of the life cycle of a plant, for example, only for a period of time during a particular stage of growth, development or differentiation. The terms "tissue specific" and "phase specific" are used together herein in referring to a regulatory element because a single regulatory element can have characteristics of both types of regulatory elements. For example, a regulatory element active only during a particular stage of plant development also can be expressed only in one or a few types of cells in the plant during the particular stage of development. As such, any attempt to classify such regulatory elements as tissue specific or as phase specific can be difficult. Accordingly, unless indicated otherwise, all regulatory elements having the

characteristic of a tissue specific regulatory element, or a phase specific regulatory element, or both are considered together for purposes of the present invention.

Examples of tissue specific promoters which have been described include the lectin (Vodkin, 1983; Lindstrom et al., 1990) corn alcohol dehydrogenase 1 (Vogel et al., 1989; Dennis et al., 1984), corn light harvesting complex (Simpson, 1986; Bansal et al., 1992), corn heat shock protein (Odell et al., 1985), pea small subunit RuBP carboxylase (Poulsen et al., 1986), Ti plasmid mannopine synthase and Ti plasmid nopaline synthase (Langridge et al., 1989), petunia chalcone isomerase (vanTunen et al., 1988), bean glycine rich protein 1 (Keller et al., 1989), truncated CaMV 35s (Odell et al., 1985), potato patatin (Wenzler et al., 1989), root cell (Yamamoto et al., 1990), maize zein (Reina et al., 1990; Kriz et al., 1987; Wandelt et al., 1989; Langridge et al., 1983; Reina et al., 1990), globulin-1 (Belanger et al., 1991), α -tubulin, cab (Sullivan et al., 1989), PEPCase (Hudspeth & Grula, 1989), R gene complex-associated promoters (Chandler et al., 1989), histone, and chalcone synthase promoters (Franken et al., 1991). Tissue specific enhancers are described by Fromm et al. (1989).

Several other tissue-specific regulated genes and/or promoters have been reported in plants, including genes encoding seed storage proteins such as napin, cruciferin, beta-conglycinin, and phaseolin, zein or oil body proteins such as oleosin, genes involved in fatty acid biosynthesis, including acyl carrier protein, stearyl-ACP desaturase, fatty acid desaturases (fad 2-1), and other genes expressed during embryonic development such as Bce4 (see, for example, EP 255378 and Kridl et al., 1991). Particularly useful for seed-specific expression is the pea vicilin promoter (Czako et al., 1992). (See also U.S. Pat. No. 5,625,136, which is incorporated herein by reference.) Other useful promoters for expression in mature leaves are those that are switched on at the onset of senescence, such as the SAG promoter from *Arabidopsis* (Gan et al., 1995).

A class of fruit-specific promoters expressed at or during antithesis through fruit development, at least until the beginning of ripening, is discussed in U.S. Pat. No. 4,943,674. cDNA clones that are preferentially expressed in cotton fiber have been isolated (John et al., 1992). cDNA clones from tomato displaying differential expression during fruit development have been isolated and characterized (Mansson et

al., 1985, Slater et al., 1985). The promoter for polygalacturonase gene is active in fruit ripening. The polygalacturonase gene is described in U.S. Pat. Nos. 4,535,060, 4,769,061, 4,801,590, and 5,107,065, each of which is incorporated herein by reference.

5 Other examples of tissue-specific promoters include those that direct expression in leaf cells following damage to the leaf (for example, from chewing insects), in tubers (for example, patatin gene promoter), and in fiber cells (an example of a developmentally-regulated fiber cell protein is E6 (John et al., 1992). The E6 gene is most active in fiber, although low levels of transcripts are found in leaf,
10 ovule and flower.

Additional tissue specific or phase specific regulatory elements include, for example, the *AGL3/FRUITFULL* regulatory element, which is activated upon floral induction (Hempel et al., Development 124:3845-3853, 1997, which is incorporated herein by reference); root specific regulatory elements such as the regulatory elements
15 from the RCP1 gene and the LRP1 gene (Tsugeki and Fedoroff, Proc. Natl. Acad. USA 96:12941-12946, 1999; Smith and Fedoroff, Plant Cell 7:735-745, 1995, each of which is incorporated herein by reference); flower specific regulatory elements such as the regulatory elements from the *LEAFY* gene and the *APETELA1* gene (Blazquez et al., Development 124:3835-3844, 1997, which is incorporated herein by reference;
20 Hempel et al., *supra*, 1997); seed specific regulatory elements such as the regulatory element from the oleosin gene (Plant et al., Plant Mol. Biol. 25:193-205, 1994, which is incorporated herein by reference), and dehiscence zone specific regulatory element. Additional tissue specific or phase specific regulatory elements include the Zn13 promoter, which is a pollen specific promoter (Hamilton et al., Plant Mol. Biol.
25 18:211-218, 1992, which is incorporated herein by reference); the *UNUSUAL FLORAL ORGANS (UFO)* promoter, which is active in apical shoot meristem; the promoter active in shoot meristems (Atanassova et al., Plant J. 2:291, 1992, which is incorporated herein by reference), the *cdc2a* promoter and *cyc07* promoter (see, for example, Ito et al., Plant Mol. Biol. 24:863, 1994; Martinez et al., Proc. Natl. Acad. Sci., USA 89:7360, 1992; Medford et al., Plant Cell 3:359, 1991; Terada et al., Plant J.
30 3:241, 1993; Wissenbach et al., Plant J. 4:411, 1993, each of which is incorporated herein by reference); the promoter of the *APETELA3* gene, which is active in floral

meristems (Jack et al., Cell 76:703, 1994, which is incorporated herein by reference; Hempel et al., *supra*, 1997); a promoter of an agamous-like (AGL) family member, for example, AGL8, which is active in shoot meristem upon the transition to flowering (Hempel et al., *supra*, 1997); floral abscission zone promoters; L1-specific
5 promoters; and the like.

The tissue-specificity of some "tissue-specific" promoters may not be absolute and may be tested by one skilled in the art using the diphtheria toxin sequence. One can also achieve tissue-specific expression with "leaky" expression by a combination of different tissue-specific promoters (Beals et al., 1997). Other tissue-specific
10 promoters can be isolated by one skilled in the art (see U.S. 5,589,379). Several inducible promoters ("gene switches") have been reported, many of which are described in the review by Gatz (1996) and Gatz (1997). These include tetracycline repressor system, *Lac* repressor system, copper inducible systems, salicylate inducible systems (such as the PR1a system), glucocorticoid (Aoyama et al., 1997) and
15 ecdysone inducible systems. Also included are the benzene sulphonamide (U.S. Pat. No. 5,364,780) and alcohol (WO 97/06269 and WO 97/06268) inducible systems and glutathione S-transferase promoters.

In some instances it might be desirable to inhibit expression of a native DNA sequence within a plant's tissues to achieve a desired phenotype. In this case, such
20 inhibition might be accomplished with transformation of the plant to comprise a constitutive, tissue-independent promoter operably linked to an antisense nucleotide sequence, such that constitutive expression of the antisense sequence produces an RNA transcript that interferes with translation of the mRNA of the native DNA sequence.

25 Inducible regulatory elements also are useful for purposes of the present invention. As used herein, the term "inducible regulatory element" means a regulatory element that, when exposed to an inducing agent, effects an increased level of transcription of a nucleotide sequence to which it is operatively linked as compared to the level of transcription, if any, in the absence of an inducing agent. Inducible
30 regulatory elements can be those that have no basal or constitutive activity and only effect transcription upon exposure to an inducing agent, or those that effect a basal or constitutive level of transcription, which is increased upon exposure to an inducing

agent. Inducible regulatory elements that effect a basal or constitutive level of expression generally are useful in a method or composition of the invention where the induced level of transcription is substantially greater than the basal or constitutive level of expression, for example, at least about two-fold greater, or at least about five-fold greater. Particularly useful inducible regulatory elements do not have a basal or constitutive activity, or increase the level of transcription at least about ten-fold greater than a basal or constitutive level of transcription associated with the regulatory element.

Inducible promoters that have been described include the ABA- and turgor-inducible promoters, the promoter of the auxin-binding protein gene (Schwob et al., 1993), the UDP glucose flavonoid glycosyl-transferase gene promoter (Ralston et al., 1988), the MPI proteinase inhibitor promoter (Cordero et al., 1994), and the glyceraldehyde-3-phosphate dehydrogenase gene promoter (Kohler et al., 1995; Quigley et al., 1989; Martinez et al., 1989).

The term "inducing agent" is used to refer to a chemical, biological or physical agent or environmental condition that effects transcription from an inducible regulatory element. In response to exposure to an inducing agent, transcription from the inducible regulatory element generally is initiated *de novo* or is increased above a basal or constitutive level of expression. Such induction can be identified using the methods disclosed herein, including detecting an increased level of RNA transcribed from a nucleotide sequence operatively linked to the regulatory element, increased expression of a polypeptide encoded by the nucleotide sequence, or a phenotype conferred by expression of the encoded polypeptide.

An inducing agent useful in a method of the invention is selected based on the particular inducible regulatory element. For example, the inducible regulatory element can be a metallothionein regulatory element, a copper inducible regulatory element or a tetracycline inducible regulatory element, the transcription from which can be effected in response to metal ions, copper or tetracycline, respectively (Furst et al., Cell 55:705-717, 1988; Mett et al., Proc. Natl. Acad. Sci., USA 90:4567-4571, 1993; Gatz et al., Plant J. 2:397-404, 1992; Roder et al., Mol. Gen. Genet. 243:32-38, 1994, each of which is incorporated herein by reference). The inducible regulatory element also can be an ecdysone regulatory element or a glucocorticoid regulatory

element, the transcription from which can be effected in response to ecdysone or other steroid (Christopherson et al., Proc. Natl. Acad. Sci., USA 89:6314-6318, 1992; Schena et al., Proc. Natl. Acad. Sci., USA 88:10421-10425, 1991, each of which is incorporated herein by reference). In addition, the regulatory element can be a cold responsive regulatory element or a heat shock regulatory element, the transcription of which can be effected in response to exposure to cold or heat, respectively (Takahashi et al., Plant Physiol. 99:383-390, 1992, which is incorporated herein by reference). Additional regulatory elements useful in the methods or compositions of the invention include, for example, the spinach nitrite reductase gene regulatory element (Back et al., Plant Mol. Biol. 17:9, 1991, which is incorporated herein by reference); a light inducible regulatory element (Feinbaum et al., Mol. Gen. Genet. 226:449, 1991; Lam and Chua, Science 248:471, 1990, each of which is incorporated herein by reference), a plant hormone inducible regulatory element (Yamaguchi-Shinozaki et al., Plant Mol. Biol. 15:905, 1990; Kares et al., Plant Mol. Biol. 15:225, 1990, each of which is incorporated herein by reference), and the like.

An inducible regulatory element also can be a plant stress-regulated regulatory element of the invention. In addition to the known stress conditions that specifically induce or repress expression from such elements, the present invention provides methods of identifying agents that mimic a stress condition. Accordingly, such stress mimics are considered inducing or repressing agents with respect to a plant stress-regulated regulatory element. In addition, a recombinant polypeptide comprising a zinc finger domain, which is specific for the regulatory element, and an effector domain, particularly an activator, can be useful as an inducing agent for a plant stress-regulated regulatory element. Furthermore, such a recombinant polypeptide provides the advantage that the effector domain can be a repressor domain, thereby providing a repressing agent, which decreases expression from the regulatory element. In addition, use of such a method of modulating expression of an endogenous plant stress-regulated gene provides the advantage that the polynucleotide encoding the recombinant polypeptide can be introduced into cells of the plant, thus providing a transgenic plant that can be regulated coordinately with the endogenous plant stress-regulated gene upon exposure to a stress condition. A polynucleotide encoding such a

recombinant polypeptide can be operatively linked to and expressed from a constitutively active, inducible or tissue specific or phase specific regulatory element.

In one embodiment, the promoter may be a gamma zein promoter, an oleosin ole16 promoter, a globulin I promoter, an actin I promoter, an actin c1 promoter, a
 5 sucrose synthetase promoter, an INOPS promoter, an EXM5 promoter, a globulin2 promoter, a b-32, ADPG-pyrophosphorylase promoter, an LtpI promoter, an Ltp2 promoter, an oleosin ole17 promoter, an oleosin ole18 promoter, an actin 2 promoter, a pollen-specific protein promoter, a pollen-specific pectate lyase promoter, an anther-specific protein promoter (Huffman), an anther-specific gene RTS2 promoter, a
 10 pollen- specific gene promoter, a tapetum-specific gene promoter, tapetum- specific gene RAB24 promoter, a anthranilate synthase alpha subunit promoter, an alpha zein promoter, an anthranilate synthase beta subunit promoter, a dihydrodipicolinate synthase promoter, a Thi 1 promoter, an alcohol dehydrogenase promoter, a cab binding protein promoter, an H3C4 promoter, a RUBISCO SS starch branching
 15 enzyme promoter, an ACCase promoter, an actin3 promoter, an actin7 promoter, a regulatory protein GF14-12 promoter, a ribosomal protein L9 promoter, a cellulose biosynthetic enzyme promoter, an S-adenosyl-L-homocysteine hydrolase promoter, a superoxide dismutase promoter, a C-kinase receptor promoter, a phosphoglycerate mutase promoter, a root-specific RCc3 mRNA promoter, a glucose-6 phosphate
 20 isomerase promoter, a pyrophosphate-fructose 6-phosphatetphosphotransferase promoter, an ubiquitin promoter, a beta-ketoacyl-ACP synthase promoter, a 33 kDa photosystem 11 promoter, an oxygen evolving protein promoter, a 69 kDa vacuolar ATPase subunit promoter, a metallothionein-like protein promoter, a glyceraldehyde-3-phosphate dehydrogenase promoter, an ABA- and ripening- inducible-like protein
 25 promoter, a phenylalanine ammonia lyase promoter, an adenosine triphosphatase S-adenosyl-L-homocysteine hydrolase promoter, an a- tubulin promoter, a cab promoter, a PEPCase promoter, an R gene promoter, a lectin promoter, a light harvesting complex promoter, a heat shock protein promoter, a chalcone synthase promoter, a zein promoter, a globulin-1 promoter, an ABA promoter, an auxin-
 30 binding protein promoter, a UDP glucose flavonoid glycosyl-transferase gene promoter, an NTI promoter, an actin promoter, an opaque 2 promoter, a b70 promoter, an oleosin promoter, a CaMV 35S promoter, a CaMV 19S promoter, a histone

promoter, a turgor-inducible promoter, a pea small subunit RuBP carboxylase promoter, a Ti plasmid mannopine synthase promoter, Ti plasmid nopaline synthase promoter, a petunia chalcone isomerase promoter, a bean glycine rich protein I promoter, a CaMV 35S transcript promoter, a potato patatin promoter, or a S-E9 small
5 subunit RuBP carboxylase promoter.

In addition to promoters, a variety of 5N and 3N transcriptional regulatory sequences are also available for use in the present invention. Transcriptional terminators are responsible for the termination of transcription and correct mRNA polyadenylation. The 3'-untranslated regulatory DNA sequence preferably includes
10 from about 50 to about 1,000, more preferably about 100 to about 1,000, nucleotide base pairs and contains plant transcriptional and translational termination sequences. Appropriate transcriptional terminators and those which are known to function in plants include the CaMV 35S terminator, the *tml* terminator, the nopaline synthase terminator, the pea *rbcS* E9 terminator, the terminator for the T7 transcript from the
15 octopine synthase gene of *Agrobacterium tumefaciens*, and the 3N end of the protease inhibitor I or II genes from potato or tomato, although other 3N elements known to those of skill in the art can also be employed. Alternatively, one also could use a gamma coixin, oleosin 3 or other terminator from the genus *Coix*. Preferred 3' elements include those from the nopaline synthase gene of *Agrobacterium*
20 *tumefaciens* (Bevan et al., 1983), the terminator for the T7 transcript from the octopine synthase gene of *Agrobacterium tumefaciens*, and the 3' end of the protease inhibitor I or II genes from potato or tomato.

As the DNA sequence between the transcription initiation site and the start of the coding sequence, i.e., the untranslated leader sequence, can influence gene
25 expression, one may also wish to employ a particular leader sequence. Preferred leader sequences are contemplated to include those that include sequences predicted to direct optimum expression of the attached sequence, i.e., to include a preferred consensus leader sequence that may increase or maintain mRNA stability and prevent inappropriate initiation of translation. The choice of such sequences will be known to
30 those of skill in the art in light of the present disclosure. Sequences that are derived from genes that are highly expressed in plants will be most preferred.

Other sequences that have been found to enhance gene expression in transgenic plants include intron sequences (e.g., from *Adh1*, *bronzel*, *actin1*, *actin 2* (WO 00/760067), or the sucrose synthase intron) and viral leader sequences (e.g., from TMV, MCMV and AMV). For example, a number of non-translated leader sequences derived from viruses are known to enhance expression. Specifically, leader sequences from tobacco mosaic virus (TMV), maize chlorotic mottle virus (MCMV), and alfalfa mosaic virus (AMV) have been shown to be effective in enhancing expression (e.g., Gallie et al., 1987; Skuzeski et al., 1990). Other leaders known in the art include but are not limited to picornavirus leaders, for example, EMCV leader (encephalomyocarditis virus 5' non-coding region; Elroy-Stein et al., 1989); potyvirus leaders, for example, TEV leader (tobacco etch virus); MDMV leader (maize dwarf mosaic virus); human immunoglobulin heavy chain binding protein (BiP) leader, (Miacejak et al., 1991); untranslated leader from the coat protein mRNA of AMV (AMV RNA 4; Jobling et al., 1987), TMV (Gallie et al., 1989), and MCMV (Lommel et al., 1991; see also, della Cioppa et al., 1987).

Regulatory elements such as *Adh* intron 1 (Callis et al., 1987), sucrose synthase intron (Vasil et al., 1989) or TMV omega element (Gallie, et al., 1989), may further be included where desired. Examples of enhancers include elements from the CaMV 35S promoter, octopine synthase genes (Ellis et al., 1987), the rice actin I gene, the maize alcohol dehydrogenase gene (Callis et al., 1987), the maize shrunken I gene (Vasil et al., 1989), TMV Omega element (Gallie et al., 1989) and promoters from non-plant eukaryotes (e.g. yeast; Ma et al., 1988).

Vectors for use in accordance with the present invention may be constructed to include the ocs enhancer element, which was first identified as a 16 bp palindromic enhancer from the octopine synthase (ocs) gene of *utilane* (Ellis et al., 1987), and is present in at least 10 other promoters (Bouchez et al., 1989). The use of an enhancer element, such as the ocs element and particularly multiple copies of the element, will act to increase the level of transcription from adjacent promoters when applied in the context of monocot transformation.

The methods of the invention provide genetically modified plant cells, which can contain, for example, a coding region, or peptide portion thereof, of a plant stress-regulated gene operatively linked to a heterologous inducible regulatory element; or a

plant stress-regulated regulatory element operatively linked to a heterologous nucleotide sequence encoding a polypeptide of interest. In such a plant, the expression from the inducible regulatory element can be effected by exposing the plant cells to an inducing agent in any of numerous ways depending, for example, on the inducible regulatory element and the inducing agent. For example, where the inducible regulatory element is a cold responsive regulatory element present in the cells of a transgenic plant, the plant can be exposed to cold conditions, which can be produced artificially, for example, by placing the plant in a thermostatically controlled room, or naturally, for example, by planting the plant in an environment characterized, at least in part, by attaining temperatures sufficient to induce transcription from the promoter but not so cold as to kill the plants. By examining the phenotype of such transgenic plants, those plants that ectopically express a gene product that confers increased resistance of the plant to cold can be identified. Similarly, a transgenic plant containing a metallothionein promoter can be exposed to metal ions such as cadmium or copper by watering the plants with a solution containing the inducing metal ions, or can be planted in soil that is contaminated with a level of such metal ions that is toxic to most plants. The phenotype of surviving plants can be observed, those expressing desirable traits can be selected.

As used herein, the term "phenotype" refers to a physically detectable characteristic. A phenotype can be identified visually by inspecting the physical appearance of a plant following exposure, for example, to increased osmotic conditions; can be identified using an assay to detecting a product produced due to expression of reporter gene, for example, an RNA molecule, a polypeptide such as an enzyme, or other detectable signal such as disclosed herein; or by using any appropriate tool useful for identifying a phenotype of a plant, for example, a microscope, a fluorescence activated cell sorter, or the like.

A transgenic plant containing an inducible regulatory element such as a steroid inducible regulatory element can be exposed to a steroid by watering the plants with a solution containing the steroid. The use of an inducible regulatory element that is induced upon exposure to a chemical or biological inducing agent that can be placed in solution or suspension in an aqueous medium can be particularly useful because the inducing agent can be applied conveniently to a relatively large crop of transgenic

plants containing the inducible regulatory element, for example, through a watering system or by spraying the inducing agent over the field. As such, inducible regulatory elements that are responsive to an environmental inducing agent, for example, cold; heat; metal ions or other potentially toxic agents such as a pesticides, which can
5 contaminate a soil; or the like; or inducible regulatory elements that are regulated by inducing agents that conveniently can be applied to plants, can be particularly useful in a method or composition of the invention, and allow the identification and selection of plants that express desirable traits and survive and grow in environments that otherwise would not support growth of the plants.

10 As disclosed herein, the present invention provides plant stress-regulated regulatory elements, which are identified based on the expression of clusters of plant genes in response to stress. As used herein, the term "stress-regulated regulatory element of a plant" or "plant stress-regulated regulatory element" means a nucleotide sequence of a plant genome that can respond to a stress such that expression of a gene
15 product encoded by a gene comprising the regulatory element (a stress-inducible gene) is increased above or decreased below the level of expression of the gene product in the absence of the stress condition. The regulatory element can be any gene regulatory element, including, for example, a promoter, an enhancer, a silencer, or the like. In one embodiment, the plant stress-regulated regulatory element is a
20 plant stress-regulated promoter.

For purposes of modulating the responsiveness of a plant to a stress condition, it can be useful to introduce a modified plant stress-regulated regulatory element into a plant. Such a modified regulatory element can have any desirable characteristic, for example, it can be inducible to a greater level than the corresponding wild-type
25 promoter, or it can be inactivated such that, upon exposure to a stress, there is little or no induction of expression of a nucleotide sequence operatively linked to the mutant element. A plant stress-regulated regulatory element can be modified by incorporating random mutations using, for example, *in vitro* recombination or DNA shuffling (Stemmer et al., Nature 370: 389-391, 1994; U.S. Pat. No. 5,605,793, each
30 of which is incorporated herein by reference). Using such a method, millions of mutant copies of the polynucleotide, for example, stress-regulated regulatory element,

can be produced based on the original nucleotide sequence, and variants with improved properties, such as increased inducibility can be recovered.

A mutation method such as DNA shuffling encompasses forming a mutagenized double-stranded polynucleotide from a template double-stranded polynucleotide, wherein the template double-stranded polynucleotide has been cleaved into double stranded random fragments of a desired size, and comprises the steps of adding to the resultant population of double-stranded random fragments one or more single or double stranded oligonucleotides, wherein the oligonucleotides comprise an area of identity and an area of heterology to the double stranded template polynucleotide; denaturing the resultant mixture of double stranded random fragments and oligonucleotides into single stranded fragments; incubating the resultant population of single stranded fragments with a polymerase under conditions that result in the annealing of the single stranded fragments at the areas of identity to form pairs of annealed fragments, the areas of identity being sufficient for one member of a pair to prime replication of the other, thereby forming a mutagenized double-stranded polynucleotide; and repeating the second and third steps for at least two further cycles, wherein the resultant mixture in the second step of a further cycle includes the mutagenized double-stranded polynucleotide from the third step of the previous cycle, and the further cycle forms a further mutagenized double-stranded polynucleotide. Preferably, the concentration of a single species of double stranded random fragment in the population of double stranded random fragments is less than 1% by weight of the total DNA. In addition, the template double stranded polynucleotide can comprise at least about 100 species of polynucleotides. The size of the double stranded random fragments can be from about 5 base pairs to 5 kilobase pairs. In a further embodiment, the fourth step of the method comprises repeating the second and the third steps for at least 10 cycles.

A plant stress-regulated regulatory element of the invention is useful for expressing a nucleotide sequence operatively linked to the element in a cell, particularly a plant cell. As used herein, the term "expression" refers to the transcription and/or translation of an endogenous gene or a transgene in plants. In the case of an antisense molecule, for example, the term "expression" refers to the transcription of the polynucleotide encoding the antisense molecule.

As used herein, the term "operatively linked," when used in reference to a plant stress-regulated regulatory element, means that the regulatory element is positioned with respect to a second nucleotide sequence such that the regulatory element effects transcription or transcription and translation of the nucleotide sequence in substantially the same manner, but not necessarily to the same extent, as it does when the regulatory element is present in its natural position in a genome. Transcriptional promoters, for example, generally act in a position and orientation dependent manner and usually are positioned at or within about five nucleotides to about fifty nucleotides 5' (upstream) of the start site of transcription of a gene in nature. In comparison, enhancers and silencers can act in a relatively position or orientation independent manner and, therefore, can be positioned several hundred or thousand nucleotides upstream or downstream from a transcription start site, or in an intron within the coding region of a gene, yet still be operatively linked to a coding region so as to effect transcription.

The second nucleotide sequence, i.e., the sequence operatively linked to the plant stress-regulated regulatory element, can be any nucleotide sequence, including, for example, a coding region of a gene or cDNA; a sequence encoding an antisense molecule, an RNAi molecule, ribozyme, triplexing agent (see, for example, Frank-Kamenetskii and Mirkin, Ann. Rev. Biochem. 64:65-95, 1995), or the like; or a sequence that, when transcribed, can be detected in the cell using, for example, by hybridization or amplification, or when translated produces a detectable signal. The term "coding region" is used broadly herein to include a nucleotide sequence of a genomic DNA or a cDNA molecule comprising all or part of a coding region of the coding strand. A coding region can be transcribed from an operatively linked regulatory element, and can be translated into a full length polypeptide or a peptide portion of a polypeptide. It should be recognized that, in a nucleotide sequence comprising a coding region, not all of the nucleotides in the sequence need necessarily encode the polypeptide and, particularly, that a gene transcript can contain one or more introns, which do not encode an amino acid sequence of a polypeptide but, nevertheless, are part of the coding region, particularly the coding strand, of the gene.

The present invention also relates to a recombinant polynucleotide, which contains a polynucleotide portion of a plant stress-regulated gene operatively linked to

a heterologous nucleotide sequence. As used herein, the term "polynucleotide portion of plant stress-regulated sequence" means a contiguous nucleotide sequence of the plant stress-regulated gene that provides a function. The portion can be any portion of the sequence, particularly a coding sequence, or a sequence encoding a peptide
5 portion of the stress-regulated polypeptide; the stress-regulated regulatory element; a sequence useful as an antisense molecule or triplexing agent; or a sequence useful for disrupting (knocking-out) an endogenous plant stress-regulated gene.

A heterologous nucleotide sequence is a nucleotide sequence that is not normally part of the plant stress-regulated gene from which the polynucleotide portion
10 of the plant stress-regulated gene-component of the recombinant polynucleotide is obtained; or, if it is a part of the plant stress-regulated gene from which the polynucleotide portion is obtained, it is an orientation other than it would normally be in, for example, is an antisense sequence, or comprises at least partially discontinuous as compared to the genomic structure, for example, a single exon operatively linked to
15 the regulatory element. In general, where the polynucleotide portion of the plant stress-regulated gene comprises the coding sequence in a recombinant polynucleotide of the invention, the heterologous nucleotide sequence will function as a regulatory element. The regulatory element can be any heterologous regulatory element, including, for example, a constitutively active regulatory element, an inducible
20 regulatory element, or a tissue specific or phase specific regulatory element, as disclosed above. Conversely, where the polynucleotide portion of the plant stress-regulated polynucleotide comprises the stress-regulated regulatory element of a recombinant polynucleotide of the invention, the heterologous nucleotide sequence generally will be a nucleotide sequence that can be transcribed and, if desired,
25 translated. Where the heterologous nucleotide sequence is expressed from a plant stress-regulated regulatory element, it generally confers a desirable phenotype to a plant cell containing the recombinant polynucleotide, or provides a means to identify a plant cell containing the recombinant polynucleotide. It should be recognized that a "desirable" phenotype can be one that decreases the ability of a plant cell to compete
30 where the plant cell, or a plant containing the cell, is an undesired plant cell. Thus, a heterologous nucleotide sequence can allow a plant to grow, for example, under conditions in which it would not normally be able to grow.

A heterologous nucleotide sequence can be, or encode, a selectable marker. As used herein, the term "selectable marker" is used herein to refer to a molecule that, when present or expressed in a plant cell, provides a means to identify a plant cell containing the marker. As such, a selectable marker can provide a means for
5 screening a population of plants, or plant cells, to identify those having the marker. A selectable marker also can confer a selective advantage to the plant cell, or a plant containing the cell. The selective advantage can be, for example, the ability to grow in the presence of a negative selective agent such as an antibiotic or herbicide, compared to the growth of plant cells that do not contain the selectable marker. The
10 selective advantage also can be due, for example, to an enhanced or novel capacity to utilize an added compound as a nutrient, growth factor or energy source. A selectable advantage can be conferred, for example, by a single polynucleotide, or its expression product, or to a combination of polynucleotides whose expression in a plant cell gives the cell with a positive selective advantage, a negative selective advantage, or both.

15 Examples of selectable markers include those that confer antimetabolite resistance, for example, dihydrofolate reductase, which confers resistance to methotrexate (Reiss, Plant Physiol. (Life Sci. Adv.) 13:143-149, 1994); neomycin phosphotransferase, which confers resistance to the aminoglycosides neomycin, kanamycin and paromycin (Herrera-Estrella, EMBO J. 2:987-995, 1983) and hygromycin
20 which confers resistance to hygromycin (Marsh, Gene 32:481-485, 1984), *trpB*, which allows cells to utilize indole in place of tryptophan; *hisD*, which allows cells to utilize histinol in place of histidine (Hartman, Proc. Natl. Acad. Sci., USA 85:8047, 1988); mannose-6-phosphate isomerase which allows cells to utilize mannose (WO 94/20627); ornithine decarboxylase, which confers resistance to the ornithine
25 decarboxylase inhibitor, 2-(difluoromethyl)-DL-ornithine (DFMO; McConlogue, 1987, In: *Current Communications in Molecular Biology*, Cold Spring Harbor Laboratory ed.); and deaminase from *Aspergillus terreus*, which confers resistance to Blasticidin S (Tamura, Biosci. Biotechnol. Biochem. 59:2336-2338, 1995).

Additional selectable markers include those that confer herbicide resistance, for
30 example, phosphinothricin acetyltransferase gene, which confers resistance to phosphinothricin (White et al., Nucl. Acids Res. 18:1062, 1990; Spencer et al., Theor. Appl. Genet. 79:625-631, 1990), a mutant EPSPV-synthase, which confers glyphosate

resistance (Hinchee et al., Bio/Technology 91:915-922, 1998), a mutant acetolactate synthase, which confers imidazolione or sulfonylurea resistance (Lee et al., EMBO J. 7:1241-1248, 1988), a mutant psbA, which confers resistance to atrazine (Smeda et al., Plant Physiol. 103:911-917, 1993), or a mutant protoporphyrinogen oxidase (see
5 U.S. Pat. No. 5,767,373), or other markers conferring resistance to an herbicide such as glufosinate. In addition, markers that facilitate identification of a plant cell containing the polynucleotide encoding the marker include, for example, luciferase (Giacomin, Plant Sci. 116:59-72, 1996; Scikantha, J. Bacteriol. 178:121, 1996), green fluorescent protein (Gerdes, FEBS Lett. 389:44-47, 1996) or fl-glucuronidase
10 (Jefferson, EMBO J. 6:3901-3907, 1997), and numerous others as disclosed herein or otherwise known in the art. Such markers also can be used as reporter molecules.

A heterologous nucleotide sequence can encode an antisense molecule, particularly an antisense molecule specific for a nucleotide sequence of a plant stress-regulated gene, for example, the gene from which the regulatory component of the
15 recombinant polynucleotide is derived. Such a recombinant polynucleotide can be useful for reducing the expression of a plant stress-regulated polypeptide in response to a stress condition because the antisense molecule, like the polypeptide, only will be induced upon exposure to the stress. A heterologous nucleotide sequence also can be, or can encode, a ribozyme or a triplexing agent. In addition to being useful as
20 heterologous nucleotide sequences, such molecules also can be used directly in a method of the invention, for example, to modulate the responsiveness of a plant cell to a stress condition. Thus, an antisense molecule, ribozyme, or triplexing agent can be contacted directly with a target cell and, upon uptake by the cell, can effect their antisense, ribozyme or triplexing activity; or can be encoded by a heterologous
25 nucleotide sequence that is expressed in a plant cell from a plant stress-regulated regulatory element, whereupon it can effect its activity.

An antisense polynucleotide, ribozyme or triplexing agent is complementary to a target sequence, which can be a DNA or RNA sequence, for example, messenger RNA, and can be a coding sequence, a nucleotide sequence comprising an intron-exon
30 junction, a regulatory sequence such as a Shine-Delgarno-like sequence, or the like. The degree of complementarity is such that the polynucleotide, for example, an antisense polynucleotide, can interact specifically with the target sequence in a cell.

Depending on the total length of the antisense or other polynucleotide, one or a few mismatches with respect to the target sequence can be tolerated without losing the specificity of the polynucleotide for its target sequence. Thus, few if any mismatches would be tolerated in an antisense molecule consisting, for example, of twenty
5 nucleotides, whereas several mismatches will not affect the hybridization efficiency of an antisense molecule that is complementary, for example, to the full length of a target mRNA encoding a cellular polypeptide. The number of mismatches that can be tolerated can be estimated, for example, using well known formulas for determining hybridization kinetics (see Sambrook et al., "Molecular Cloning; A Laboratory
10 Manual" 2nd Edition (Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY; 1989)) or can be determined empirically using methods as disclosed herein or otherwise known in the art, particularly by determining that the presence of the antisense polynucleotide, ribozyme, or triplexing agent in a cell decreases the level of the target sequence or the expression of a polypeptide encoded by the target sequence
15 in the cell.

A nucleotide sequence useful as an antisense molecule, a ribozyme or a triplexing agent can inhibit translation or cleave a polynucleotide encoded by plant stress-regulated gene, thereby modulating the responsiveness of a plant cell to a stress condition. An antisense molecule, for example, can bind to an mRNA to form a
20 double stranded molecule that cannot be translated in a cell. Antisense oligonucleotides of at least about 15 to 25 nucleotides are preferred since they are easily synthesized and can hybridize specifically with a target sequence, although longer antisense molecules can be expressed from a recombinant polynucleotide introduced into the target cell. Specific nucleotide sequences useful as antisense
25 molecules can be identified using well known methods, for example, gene walking methods (see, for example, Seimiya et al., J. Biol. Chem. 272:4631-4636 (1997), which is incorporated herein by reference). Where the antisense molecule is contacted directly with a target cell, it can be operatively associated with a chemically reactive group such as iron-linked EDTA, which cleaves a target RNA at the site of
30 hybridization. A triplexing agent, in comparison, can stall transcription (Maher et al., Antisense Res. Devel. 1:227 (1991); Helene, Anticancer Drug Design 6:569 (1991)).

A plant stress-regulated regulatory element can be included in an expression cassette. As used herein, the term "expression cassette" refers to a nucleotide sequence that can direct expression of an operatively linked polynucleotide. Thus, a plant stress-regulated regulatory element can constitute an expression cassette, or component thereof. An expression cassette is particularly useful for directing expression of a nucleotide sequence, which can be an endogenous nucleotide sequence or a heterologous nucleotide sequence, in a cell, particularly a plant cell. If desired, an expression cassette also can contain additional regulatory elements, for example, nucleotide sequences required for proper translation of a polynucleotide sequence into a polypeptide. In general, an expression cassette can be introduced into a plant cell such that the plant cell, a plant resulting from the plant cell, seeds obtained from such a plant, or plants produced from such seeds are resistant to a stress condition.

Additional regulatory sequences as disclosed above or other desirable sequences such as selectable markers or the like can be incorporated into an expression cassette containing a plant stress-regulated regulatory element (see, for example, WO 99/47552). Examples of suitable markers include dihydrofolate reductase (DHFR) or neomycin resistance for eukaryotic cells and tetracycline or ampicillin resistance for *E. coli*. Selection markers in plants include bleomycin, gentamycin, glyphosate, hygromycin, kanamycin, methotrexate, phleomycin, phosphinotricin, spectinomycin, streptomycin, sulfonamide and sulfonylureas resistance (see, for example, Maliga et al., *Methods in Plant Molecular Biology*, Cold Spring Harbor Laboratory Press, 1995, page 39). The selection marker can have its own promoter or its expression can be driven by the promoter operably linked to the sequence of interest. Additional sequences such as intron sequences (e.g. from *Adh1* or *bronzel*) or viral leader sequences (e.g. from TMV, MCMV and AIVTV), all of which can enhance expression, can be included in the cassette. In addition, where it is desirable to target expression of a nucleotide sequence operatively linked to the stress-regulated regulatory element, a sequence encoding a cellular localization motif can be included in the cassette, for example, such that an encoded transcript or translation product is translocated to and localizes in the cytosol, nucleus, a chloroplast, or another subcellular organelle. Examples of useful transit peptides and transit peptide

sequences can be found in Von Heijne et al., Plant Mol. Biol. Rep. 9: 104, 1991; Clark et al., J. Biol. Chem. 264:17544, 1989; della Cioppa et al., Plant Physiol. 84:965, 1987; Romer et al., Biochem. Biophys. Res. Comm. 196:1414, 1993; Shah et al., Science 233:478, 1986; Archer et al., J. Bioenerg Biomemb. 22:789, 1990; Scandalios, Prog. Clin. Biol. Res. 344:515, 1990; Weisbeek et al., J. Cell Sci. Suppl. 11:199, 1989; Bruce, Trends Cell Biol. 10:440, 2000. The present invention can utilize native or heterologous transit peptides. The encoding sequence for a transit peptide can include all or a portion of the encoding sequence for a particular transit peptide, and may also contain portions of the mature protein encoding sequence associated with a particular transit peptide.

A polynucleotide portion of a plant stress-regulated plant gene, or an expression cassette, can be introduced into a cell as a naked DNA molecule, can be incorporated in a matrix such as a liposome or a particle such as a viral particle, or can be incorporated into a vector. Such vectors can be cloning or expression vectors, but other uses are within the scope of the present invention. A cloning vector is a self-replicating DNA molecule that serves to transfer a DNA segment into a host cell. The three most common types of cloning vectors are bacterial plasmids, phages, and other viruses. An expression vector is a cloning vector designed so that a coding sequence inserted at a particular site will be transcribed and translated into a protein. Incorporation of the polynucleotide into a vector can facilitate manipulation of the polynucleotide, or introduction of the polynucleotide into a plant cell. A vector can be derived from a plasmid or a viral vector such as a T-DNA vector (Horsch et al., Science 227:1229-1231, 1985, which is incorporated herein by reference). If desired, the vector can comprise components of a plant transposable element, for example, a Ds transposon (Bancroft and Dean, Genetics 134:1221-1229, 1993, which is incorporated herein by reference) or an Spm transposon (Aarts et al., Mol. Gen. Genet. 247:555-564, 1995, which is incorporated herein by reference).

In addition to containing the polynucleotide portion of a plant stress-regulated gene, a vector can contain various nucleotide sequences that facilitate, for example, rescue of the vector from a transformed plant cell; passage of the vector in a host cell, which can be a plant, animal, bacterial, or insect host cell; or expression of an encoding nucleotide sequence in the vector, including all or a portion of a rescued

coding region. As such, the vector can contain any of a number of additional transcription and translation elements, including constitutive and inducible promoters, enhancers, and the like (see, for example, Bitter et al., Meth. Enzymol. 153:516-544, 1987). For example, a vector can contain elements useful for passage, growth or
5 expression in a bacterial system, including a bacterial origin of replication; a promoter, which can be an inducible promoter; and the like. In comparison, a vector that can be passaged in a mammalian host cell system can have a promoter such as a metallothionein promoter, which has characteristics of both a constitutive promoter and an inducible promoter, or a viral promoter such as a retrovirus long terminal
10 repeat, an adenovirus late promoter, or the like. A vector also can contain one or more restriction endonuclease recognition and cleavage sites, including, for example, a polylinker sequence, to facilitate rescue of a nucleotide sequence operably linked to the polynucleotide portion.

The present invention also relates to a method of using a polynucleotide
15 portion of a plant stress-regulated gene to confer a selective advantage on a plant cell. Such a method can be performed by introducing, for example, a plant stress-regulated regulatory element into a plant cell, wherein, upon exposure of the plant cell to a stress condition to which the regulatory element is responsive, a nucleotide sequence operatively linked to the regulatory element is expressed, thereby conferring a
20 selective advantage to plant cell. The operatively linked nucleotide sequence can be a heterologous nucleotide sequence, which can be operatively linked to the regulatory element prior to introduction of the regulatory sequence into the plant cell; or can be an endogenous nucleotide sequence into which the regulatory element was targeted by a method such as homologous recombination. The selective advantage conferred by
25 the operatively linked nucleotide sequence can be such that the plant is better able to tolerate the stress condition; or can be any other selective advantage.

As used herein, the term "selective advantage" refers to the ability of a particular organism to better propagate, develop, grow, survive, or otherwise tolerate a condition as compared to a corresponding reference organism that does not contain
30 a plant-stress regulated polynucleotide portion of the present invention. In one embodiment, a selective advantage is exemplified by the ability of a desired plant, plant cell, or the like, that contains an introduced plant stress-regulated regulatory

element, to grow better than an undesired plant, plant cell, or the like, that does not contain the introduced regulatory element. For example, a recombinant polynucleotide comprising a plant stress-regulated regulatory element operatively linked to a heterologous nucleotide sequence encoding an enzyme that inactivates an herbicide can be introduced in a desired plant. Upon exposure of a mixed population of plants comprising the desired plants, which contain the recombinant polynucleotide, and one or more other populations of undesired plants, which lack the recombinant polynucleotide, to a stress condition that induces expression of the regulatory element and to the herbicide, the desired plants will have a greater likelihood of surviving exposure to the toxin and, therefore, a selective advantage over the undesired plants.

In another embodiment, a selective advantage is exemplified by the ability of a desired plant, plant cell, or the like, to better propagate, develop, grow, survive, or otherwise tolerate a condition as compared to an undesired plant, plant cell, or the like, that contains an introduced plant stress-regulated regulatory element. For example, a recombinant polynucleotide comprising a plant stress-regulated regulatory element operatively linked to a plant cell toxin can be introduced into cells of an undesirable plant present in a mixed population of desired and undesired plants, for example, food crops and weeds, respectively, then the plants can be exposed to stress conditions that induce expression from the plant stress-regulated regulatory element, whereby expression of the plant cell toxin results in inhibition of growth or death of the undesired plants, thereby providing a selective advantage to the desired plants, which no longer have to compete with the undesired plants for nutrients, light, or the like. In another example, a plant stress-regulated regulatory element operatively linked to a plant cell toxin can be introduced into cells of plants used as a nurse crop. Nurse crops, also called cover or companion crops, are planted in combination with plants of interest to provide, among other things, shade and soil stability during establishment of the desired plants. Once the desired plants have become established, the presence of the nurse crop may no longer be desirable. Exposure to conditions inducing expression of the gene linked to the plant stress-regulated regulatory element allows elimination of the nurse crop. Alternatively nurse crops can be made less tolerate to abiotic stress by the inhibition of any of the stress-regulated sequences

disclosed herein. Inhibition can be accomplished by any of the method described herein. Upon exposure of the nurse crop to the stress, the decreased ability of the nurse crop to respond to the stress will result in elimination of the nurse crop, leaving only the desired plants.

5 The invention also provides a means of producing a transgenic plant, which comprises plant cells that exhibit altered responsiveness to a stress condition. As such, the present invention further provides a transgenic plant, or plant cells or tissues derived therefrom, which are genetically modified to respond to stress differently than a corresponding wild-type plant or plant not containing constructs of the present
10 invention would respond. As used herein, the term "responsiveness to a stress condition" refers to the ability of a plant to express a plant stress-regulated gene upon exposure to the stress condition. A transgenic plant cell contains a polypeptide portion of a plant stress-regulated gene, or a mutant form thereof, for example, a knock-out mutant. A knock-out mutant form of a plant stress-regulated gene can
15 contain, for example, a mutation such that a STOP codon is introduced into the reading frame of the translated portion of the gene such that expression of a functional stress-regulated polypeptide is prevented; or a mutation in the stress-regulated regulatory element such that inducibility of the element in response to a stress condition is inhibited. Such transgenic plants of the invention can display any of
20 various idiotypic modifications in response to an abiotic stress, including altered tolerance to the stress condition, as well as increased or decreased plant growth, root growth, yield, or the like, as compared to the corresponding wild-type plant.

 The term "plant" is used broadly herein to include any plant at any stage of development, or to part of a plant, including a plant cutting, a plant cell, a plant cell
25 culture, a plant organ, a plant seed, and a plantlet. A plant cell is the structural and physiological unit of the plant, comprising a protoplast and a cell wall. A plant cell can be in the form of an isolated single cell or a cultured cell, or can be part of higher organized unit, for example, a plant tissue, plant organ, or plant. Thus, a plant cell can be a protoplast, a gamete producing cell, or a cell or collection of cells that can
30 regenerate into a whole plant. As such, a seed, which comprises multiple plant cells and is capable of regenerating into a whole plant, is considered plant cell for purposes of this disclosure. A plant tissue or plant organ can be a seed, protoplast, callus, or

any other groups of plant cells that is organized into a structural or functional unit. Particularly useful parts of a plant include harvestable parts and parts useful for propagation of progeny plants. A harvestable part of a plant can be any useful part of a plant, for example, flowers, pollen, seedlings, tubers, leaves, stems, fruit, seeds, roots, and the like. A part of a plant useful for propagation includes, for example, seeds, fruits, cuttings, seedlings, tubers, rootstocks, and the like.

A transgenic plant can be regenerated from a transformed plant cell. As used herein, the term "regenerate" means growing a whole plant from a plant cell; a group of plant cells; a protoplast; a seed; or a piece of a plant such as a callus or tissue.

10 Regeneration from protoplasts varies from species to species of plants. For example, a suspension of protoplasts can be made and, in certain species, embryo formation can be induced from the protoplast suspension, to the stage of ripening and germination. The culture media generally contains various components necessary for growth and regeneration, including, for example, hormones such as auxins and cytokinins; and

15 amino acids such as glutamic acid and proline, depending on the particular plant species. Efficient regeneration will depend, in part, on the medium, the genotype, and the history of the culture. If these variables are controlled, however, regeneration is reproducible.

Regeneration can occur from plant callus, explants, organs or plant parts.

20 Transformation can be performed in the context of organ or plant part regeneration. (see Meth. Enzymol. Vol. 118; Klee et al. Ann. Rev. Plant Physiol. 38:467, 1987, which is incorporated herein by reference). Utilizing the leaf disk-transformation-regeneration method, for example, disks are cultured on selective media, followed by shoot formation in about two to four weeks (see Horsch et al., *supra*, 1985). Shoots

25 that develop are excised from calli and transplanted to appropriate root-inducing selective medium. Rooted plantlets are transplanted to soil as soon as possible after roots appear. The plantlets can be repotted as required, until reaching maturity.

In vegetatively propagated crops, the mature transgenic plants are propagated utilizing cuttings or tissue culture techniques to produce multiple identical plants.

30 Selection of desirable transgenotes is made and new varieties are obtained and propagated vegetatively for commercial use. In seed propagated crops, the mature transgenic plants can be self crossed to produce a homozygous inbred plant. The

resulting inbred plant produces seeds that contain the introduced plant stress-induced regulatory element, and can be grown to produce plants that express a polynucleotide or polypeptide in response to a stress condition that induces expression from the regulatory element. As such, the invention further provides seeds produced by a
5 transgenic plant obtained by a method of the invention.

In addition, transgenic plants comprising different recombinant sequences can be crossbred, thereby providing a means to obtain transgenic plants containing two or more different transgenes, each of which contributes a desirable characteristic to the plant. Methods for breeding plants and selecting for crossbred plants having desirable
10 characteristics or other characteristics of interest are well known in the art.

A method of the invention can be performed by introducing a polynucleotide portion of a plant stress-regulated gene into the plant. As used herein, the term "introducing" means transferring a polynucleotide into a plant cell. A polynucleotide can be introduced into a cell by a variety of methods well known to those of ordinary
15 skill in the art. For example, the polynucleotide can be introduced into a plant cell using a direct gene transfer method such as electroporation or microprojectile mediated transformation, or using *Agrobacterium* mediated transformation. Non-limiting examples of methods for the introduction of polynucleotides into plants are provided in greater detail herein. As used herein, the term "transformed" refers to a
20 plant cell containing an exogenously introduced polynucleotide portion of a plant stress-regulated gene that is or can be rendered active in a plant cell, or to a plant comprising a plant cell containing such a polynucleotide.

It should be recognized that one or more polynucleotides, which are the same or different can be introduced into a plant, thereby providing a means to obtain a
25 genetically modified plant containing multiple copies of a single transgenic sequence, or containing two or more different transgenic sequences, either or both of which can be present in multiple copies. Such transgenic plants can be produced, for example, by simply selecting plants having multiple copies of a single type of transgenic sequence; by cotransfecting plant cells with two or more populations of different
30 transgenic sequences and identifying those containing the two or more different transgenic sequences; or by crossbreeding transgenic plants, each of which contains

one or more desired transgenic sequences, and identifying those progeny having the desired sequences.

Methods for introducing a polynucleotide into a plant cell to obtain a transformed plant also include direct gene transfer (see European Patent A 164 575),
5 injection, electroporation, biolistic methods such as particle bombardment, pollen-mediated transformation, plant RNA virus-mediated transformation, liposome-mediated transformation, transformation using wounded or enzyme-degraded immature embryos, or wounded or enzyme-degraded embryogenic callus, and the like. Transformation methods using *Agrobacterium tumefaciens* tumor inducing (Ti)
10 plasmids or root-inducing (Ri) plasmids, or plant virus vectors are well known in the art (see, for example, WO 99/47552; Weissbach & Weissbach, "Methods for Plant Molecular Biology" (Academic Press, NY 1988), section VIII, pages 421-463; Grierson and Corey, "Plant Molecular Biology" 2d Ed. (Blackie, London 1988), Chapters 7-9, each of which is incorporated herein by reference; Horsch et al., *supra*,
15 1985). The wild-type form of *Agrobacterium*, for example, contains a Ti plasmid, which directs production of tumorigenic crown gall growth on host plants. Transfer of the tumor inducing T-DNA region of the Ti plasmid to a plant genome requires the Ti plasmid-encoded virulence genes as well as T-DNA borders, which are a set of direct DNA repeats that delineate the region to be transferred. An *Agrobacterium*
20 based vector is a modified form of a Ti plasmid, in which the tumor inducing functions are replaced by a nucleotide sequence of interest that is to be introduced into the plant host.

Methods of using *Agrobacterium* mediated transformation include cocultivation of *Agrobacterium* with cultured isolated protoplasts; transformation of
25 plant cells or tissues with *Agrobacterium*; and transformation of seeds, apices or meristems with *Agrobacterium*. In addition, *in planta* transformation by *Agrobacterium* can be performed using vacuum infiltration of a suspension of *Agrobacterium* cells (Bechtold et al., C.R. Acad. Sci. Paris 316:1194, 1993, which is incorporated herein by reference).

30 *Agrobacterium* mediated transformation can employ cointegrate vectors or binary vector systems, in which the components of the Ti plasmid are divided between a helper vector, which resides permanently in the *Agrobacterium* host and carries the

virulence genes, and a shuttle vector, which contains the gene of interest bounded by T-DNA sequences. Binary vectors are well known in the art (see, for example, De Framond, BioTechnology 1:262, 1983; Hoekema et al., Nature 303:179, 1983, each of which is incorporated herein by reference) and are commercially available (Clontech; Palo Alto CA). For transformation, *Agrobacterium* can be cocultured, for example, with plant cells or wounded tissue such as leaf tissue, root explants, hypocotyledons, stem pieces or tubers (see, for example, Glick and Thompson, "Methods in Plant Molecular Biology and Biotechnology" (Boca Raton FL, CRC Press 1993), which is incorporated herein by reference). Wounded cells within the plant tissue that have been infected by *Agrobacterium* can develop organs *de novo* when cultured under the appropriate conditions; the resulting transgenic shoots eventually give rise to transgenic plants, which contain an exogenous polynucleotide portion of a plant stress-regulated gene.

Agrobacterium mediated transformation has been used to produce a variety of transgenic plants, including, for example, transgenic cruciferous plants such as *Arabidopsis*, mustard, rapeseed and flax; transgenic leguminous plants such as alfalfa, pea, soybean, trefoil and white clover; and transgenic solanaceous plants such as eggplant, petunia, potato, tobacco and tomato (see, for example, Wang et al., "Transformation of Plants and Soil Microorganisms" (Cambridge, University Press 1995), which is incorporated herein by reference). In addition, *Agrobacterium* mediated transformation can be used to introduce an exogenous polynucleotide sequence, for example, a plant stress-regulated regulatory element into apple, aspen, belladonna, black currant, carrot, celery, cotton, cucumber, grape, horseradish, lettuce, morning glory, muskmelon, neem, poplar, strawberry, sugar beet, sunflower, walnut, asparagus, rice and other plants (see, for example, Glick and Thompson, *supra*, 1993; Hiei et al., Plant J. 6:271-282, 1994; Shimamoto, Science 270:1772-1773, 1995).

Suitable strains of *Agrobacterium tumefaciens* and vectors as well as transformation of *Agrobacteria* and appropriate growth and selection media are well known in the art (GV3101, pMK90RK), Koncz, Mol. Gen. Genet. 204:383-396, 1986; (C58C1, pGV3850kan), Deblaere, Nucl. Acid Res. 13:4777, 1985; Bevan, Nucl. Acid Res. 12:8711, 1984; Koncz, Proc. Natl. Acad. Sci. USA 86:8467-8471, 1986; Koncz, Plant Mol. Biol. 20:963-976, 1992; Koncz, Specialized vectors for gene tagging and

expression studies. In: Plant Molecular Biology Manual Vol. 2, Gelvin and Schilperoort (Eds.), Dordrecht, The Netherlands: Kluwer Academic Publ. (1994), 1-22; European Patent A-1 20 516; Hoekema: The Binary Plant Vector System, Offsetdrukkerij Kanters B. V., Alblasserdam (1985), Chapter V; Fraley, Crit. Rev. Plant. Sci., 4:1-46; An, EMBO J. 4:277-287, 1985).

Where a polynucleotide portion of a plant stress-regulated gene is contained in vector, the vector can contain functional elements, for example "left border" and "right border" sequences of the T-DNA of *Agrobacterium*, which allow for stable integration into a plant genome. Furthermore, methods and vectors that permit the generation of marker-free transgenic plants, for example, where a selectable marker gene is lost at a certain stage of plant development or plant breeding, are known, and include, for example, methods of co-transformation (Lyznik, Plant Mol. Biol. 13:151-161, 1989; Peng, Plant Mol. Biol. 27:91-104, 1995), or methods that utilize enzymes capable of promoting homologous recombination in plants (see, e.g., W097/08331; Bayley, Plant Mol. Biol. 18:353-361, 1992; Lloyd, Mol. Gen. Genet. 242:653-657, 1994; Maeser, Mol. Gen. Genet. 230:170-176, 1991; Onouchi, Nucl. Acids Res. 19:6373-6378, 1991; see, also, Sambrook et al., *supra*, 1989).

A direct gene transfer method such as electroporation also can be used to introduce a polynucleotide portion of a plant stress-regulated gene into a cell such as a plant cell. For example, plant protoplasts can be electroporated in the presence of the regulatory element, which can be in a vector (Fromm et al., Proc. Natl. Acad. Sci., USA 82:5824, 1985, which is incorporated herein by reference). Electrical impulses of high field strength reversibly permeabilize membranes allowing the introduction of the nucleic acid. Electroporated plant protoplasts reform the cell wall, divide and form a plant callus. Microinjection can be performed as described in Potrykus and Spangenberg (eds.), *Gene Transfer To Plants* (Springer Verlag, Berlin, NY 1995). A transformed plant cell containing the introduced polynucleotide can be identified by detecting a phenotype due to the introduced polynucleotide, for example, increased or decreased tolerance to a stress condition.

Microprojectile mediated transformation also can be used to introduce a polynucleotide into a plant cell (Klein et al., Nature 327:70-73, 1987, which is incorporated herein by reference). This method utilizes microprojectiles such as gold

or tungsten, which are coated with the desired nucleic acid molecule by precipitation with calcium chloride, spermidine or polyethylene glycol. The microprojectile particles are accelerated at high speed into a plant tissue using a device such as the BIOLISTIC PD-1000 (BioRad; Hercules CA).

5 Microprojectile mediated delivery ("particle bombardment") is especially useful to transform plant cells that are difficult to transform or regenerate using other methods. Methods for the transformation using biolistic methods are well known (Wan, Plant Physiol. 104:37-48, 1984; Vasil, Bio/Technology 11:1553-1558, 1993; Christou, Trends in Plant Science 1:423-431, 1996). Microprojectile mediated
10 transformation has been used, for example, to generate a variety of transgenic plant species, including cotton, tobacco, corn, hybrid poplar and papaya (see Glick and Thompson, *supra*, 1993). Important cereal crops such as wheat, oat, barley, sorghum and rice also have been transformed using microprojectile mediated delivery (Duan et al., Nature Biotech. 14:494-498, 1996; Shimamoto, Curr. Opin. Biotech. 5:158-162,
15 1994). A rapid transformation regeneration system for the production of transgenic plants such as a system that produces transgenic wheat in two to three months (see European Patent No. EP 0709462A2, which is incorporated herein by reference) also can be useful for producing a transgenic plant using a method of the invention, thus allowing more rapid identification of gene functions. The transformation of most
20 dicotyledonous plants is possible with the methods described above. Transformation of monocotyledonous plants also can be transformed using, for example, biolistic methods as described above, protoplast transformation, electroporation of partially permeabilized cells, introduction of DNA using glass fibers, *Agrobacterium* mediated transformation, and the like.

25 Plastid transformation also can be used to introduce a polynucleotide portion of a plant stress-regulated gene into a plant cell (U.S. Patent Nos. 5,451,513, 5,545,817, and 5,545,818; WO 95/16783; McBride et al., Proc. Natl. Acad. Sci., USA 91:7301-7305, 1994). Chloroplast transformation involves introducing regions of cloned plastid DNA flanking a desired nucleotide sequence, for example, a selectable
30 marker together with polynucleotide of interest into a suitable target tissue, using, for example, a biolistic or protoplast transformation method (e.g., calcium chloride or PEG mediated transformation). One to 1.5 kb flanking regions ("targeting

sequences") facilitate homologous recombination with the plastid genome, and allow the replacement or modification of specific regions of the plastome. Using this method, point mutations in the chloroplast 16S rRNA and rps12 genes, which confer resistance to spectinomycin and streptomycin, can be utilized as selectable markers
5 for transformation (Svab et al., Proc. Natl. Acad. Sci., USA 87:8526-8530, 1990; Staub and Maliga, Plant Cell 4:39-45, 1992), resulted in stable homoplasmic transformants; at a frequency of approximately one per 100 bombardments of target leaves. The presence of cloning sites between these markers allowed creation of a plastid targeting vector for introduction of foreign genes (Staub and Maliga, EMBO J.
10 12:601-606, 1993). Substantial increases in transformation frequency are obtained by replacement of the recessive rRNA or r-protein antibiotic resistance genes with a dominant selectable marker, the bacterial aadA gene encoding the spectinomycin-detoxifying enzyme aminoglycoside-3'-adenyltransferase (Svab and Maliga, Proc. Natl. Acad. Sci., USA 90:913-917, 1993). Approximately 15 to 20 cell division
15 cycles following transformation are generally required to reach a homoplastidic state. Plastid expression, in which genes are inserted by homologous recombination into all of the several thousand copies of the circular plastid genome present in each plant cell, takes advantage of the enormous copy number advantage over nuclear-expressed genes to permit expression levels that can readily exceed 10% of the total soluble
20 plant protein.

Plants suitable to treatment according to a method of the invention can be monocots or dicots and include, but are not limited to, corn (*Zea mays*), *Brassica* sp. (e.g., *B. napus*, *B. rapa*, *B. juncea*), particularly those *Brassica* species useful as sources of seed oil, alfalfa (*Medicago sativa*), rice (*Oryza sativa*), rye (*Secale
25 cereale*), sorghum (*Sorghum bicolor*, *Sorghum vulgare*), millet (e.g., pearl millet (*Pennisetum glaucum*), proso millet (*Panicum miliaceum*), foxtail millet (*Setaria italica*), finger millet (*Eleusine coracana*)), sunflower (*Helianthus annuus*), safflower (*Carthamus tinctorius*), wheat (*Triticum aestivum*), soybean (*Glycine max*), tobacco (*Nicotiana tabacum*), potato (*Solanum tuberosum*), peanuts (*Arachis hypogaea*),
30 cotton (*Gossypium barbadense*, *Gossypium hirsutum*), sweet potato (*Ipomoea batatas*), cassava (*Manihot esculenta*), coffee (*Cofea* spp.), coconut (*Cocos nucifera*), pineapple (*Ananas comosus*), citrus trees (*Citrus* spp.), cocoa (*Theobroma cacao*), tea

(*Camellia sinensis*), banana (*Musa* spp.), avocado (*Persea utilane*), fig (*Ficus casica*), guava (*Psidium guajava*), mango (*Mangifera indica*), olive (*Olea europaea*), papaya (*Carica papaya*), cashew (*Anacardium occidentale*), macadamia (*Macadamia integrifolia*), almond (*Prunus amygdalus*), sugar beets (*Beta vulgaris*), sugarcane
5 (*Saccharum* spp.), oats, duckweed (*Lemna*), barley, tomatoes (*Lycopersicon esculentum*), lettuce (e.g., *Lactuca sativa*), green beans (*Phaseolus vulgaris*), lima beans (*Phaseolus limensis*), peas (*Lathyrus* spp.), and members of the genus *Cucumis* such as cucumber (*C. sativus*), cantaloupe (*C. cantalupensis*), and musk melon (*C. melo*).

10 Ornamentals such as azalea (*Rhododendron* spp.), hydrangea (*Macrophylla hydrangea*), hibiscus (*Hibiscus rosasanensis*), roses (*Rosa* spp.), tulips (*Tulipa* spp.), daffodils (*Narcissus* spp.), petunias (*Petunia hybrida*), carnation (*Dianthus caryophyllus*), poinsettia (*Euphorbia pulcherrima*), and chrysanthemum are also included. Additional ornamentals within the scope of the invention include impatiens,
15 Begonia, Pelargonium, Viola, Cyclamen, Verbena, Vinca, Tagetes, Primula, Saint Paulia, Agertum, Amaranthus, Antihirrhinum, Aquilegia, Cineraria, Clover, Cosmo, Cowpea, Dahlia, Datura, Delphinium, Gerbera, Gladiolus, Gloxinia, Hippeastrum, Mesembryanthemum, Salpiglossos, and Zinnia.

Conifers that may be employed in practicing the present invention include, for
20 example, pines such as loblolly pine (*Pinus taeda*), slash pine (*Pinus elliotii*), ponderosa pine (*Pinus ponderosa*), lodgepole pine (*Pinus contorta*), and Monterey pine (*Pinus radiata*), Douglas-fir (*Pseudotsuga menziesii*); Western hemlock (*Tsuga utilane*); Sitka spruce (*Picea glauca*); redwood (*Sequoia sempervirens*); true firs such as silver fir (*Abies amabilis*) and balsam fir (*Abies balsamea*); and cedars such as
25 Western red cedar (*Thuja plicata*) and Alaska yellow-cedar (*Chamaecyparis nootkatensis*).

Leguminous plants which may be used in the practice of the present invention include beans and peas. Beans include guar, locust bean, fenugreek, soybean, garden beans, cowpea, mungbean, lima bean, fava bean, lentils, chickpea, etc. Legumes
30 include, but are not limited to, *Arachis*, e.g., peanuts, *Vicia*, e.g., crown vetch, hairy vetch, adzuki bean, mung bean, and chickpea, *Lupinus*, e.g., lupine, trifolium, *Phaseolus*, e.g., common bean and lima bean, *Pisum*, e.g., field bean, *Melilotus*, e.g.,

clover, *Medicago*, e.g., alfalfa, Lotus, e.g., trefoil, lens, e.g., lentil, and false indigo. Preferred forage and turf grass for use in the methods of the invention include alfalfa, orchard grass, tall fescue, perennial ryegrass, creeping bent grass, and redtop. Other plants within the scope of the invention include *Acacia*, aneth, artichoke, 5 arugula, blackberry, canola, cilantro, clementines, escarole, eucalyptus, fennel, grapefruit, honey dew, jicama, kiwifruit, lemon, lime, mushroom, nut, okra, orange, parsley, persimmon, plantain, pomegranate, poplar, radiata pine, radicchio, Southern pine, sweetgum, tangerine, triticale, vine, yams, apple, pear, quince, cherry, apricot, melon, hemp, buckwheat, grape, raspberry, chenopodium, blueberry, nectarine, peach, 10 plum, strawberry, watermelon, eggplant, pepper, cauliflower, Brassica, e.g., broccoli, cabbage, utilian sprouts, onion, carrot, leek, beet, broad bean, celery, radish, pumpkin, endive, gourd, garlic, snapbean, spinach, squash, turnip, utilane, chicory, groundnut and zucchini.

Angiosperms are divided into two broad classes based on the number of 15 cotyledons, which are seed leaves that generally store or absorb food; a monocotyledonous angiosperm has a single cotyledon, and a dicotyledonous angiosperm has two cotyledons. Angiosperms produce a variety of useful products including materials such as lumber, rubber, and paper; fibers such as cotton and linen; herbs and medicines such as quinine and vinblastine; ornamental flowers such as 20 roses and orchids; and foodstuffs such as grains, oils, fruits and vegetables.

Angiosperms encompass a variety of flowering plants, including, for example, cereal plants, leguminous plants, oilseed plants, hardwood trees, fruit-bearing plants and ornamental flowers, which general classes are not necessarily exclusive. Cereal plants, which produce an edible grain cereal, include, for example, corn, rice, wheat, 25 barley, oat, rye, orchardgrass, guinea grass, sorghum and turfgrass. Leguminous plants include members of the pea family (*Fabaceae*) and produce a characteristic fruit known as a legume. Examples of leguminous plants include, for example, soybean, pea, chickpea, moth bean, broad bean, kidney bean, lima bean, lentil, cowpea, dry bean, and peanut, as well as alfalfa, birdsfoot trefoil, clover and sainfoin. 30 Oilseed plants, which have seeds that are useful as a source of oil, include soybean, sunflower, rapeseed (canola) and cottonseed.

Angiosperms also include hardwood trees, which are perennial woody plants that generally have a single stem (trunk). Examples of such trees include alder, ash, aspen, basswood (linden), beech, birch, cherry, cottonwood, elm, eucalyptus, hickory, locust, maple, oak, persimmon, poplar, sycamore, walnut, sequoia, and willow. Trees
5 are useful, for example, as a source of pulp, paper, structural material and fuel.

Angiosperms are fruit-bearing plants that produce a mature, ripened ovary, which generally contains seeds. A fruit can be suitable for human or animal consumption or for collection of seeds to propagate the species. For example, hops are a member of the mulberry family that are prized for their flavoring in malt liquor.
10 Fruit-bearing angiosperms also include grape, orange, lemon, grapefruit, avocado, date, peach, cherry, olive, plum, coconut, apple and pear trees and blackberry, blueberry, raspberry, strawberry, pineapple, tomato, cucumber and eggplant plants. An ornamental flower is an angiosperm cultivated for its decorative flower. Examples of commercially important ornamental flowers include rose, orchid, lily, tulip and
15 chrysanthemum, snapdragon, camellia, carnation and petunia plants. The skilled artisan will recognize that the methods of the invention can be practiced using these or other angiosperms, as desired, as well as gymnosperms, which do not produce seeds in a fruit.

A method of producing a transgenic plant can be performed by introducing a
20 polynucleotide portion of plant stress-regulated gene into a plant cell genome, whereby the polynucleotide portion of the plant stress-regulated gene modulates a response of the plant cell to a stress condition, thereby producing a transgenic plant, which comprises plant cells that exhibit altered responsiveness to the stress condition. In one embodiment, the polynucleotide portion of the plant stress-regulated gene
25 encodes a stress-regulated polypeptide or functional peptide portion thereof, wherein expression of the stress-regulated polypeptide or functional peptide portion thereof either increases the stress tolerance of the transgenic plant, or decreases the stress tolerance of the transgenic plant. The polynucleotide portion of the plant stress-regulated gene encoding the stress-regulated polypeptide or functional peptide portion
30 thereof can be operatively linked to a heterologous promoter.

In another embodiment, the polynucleotide portion of the plant stress-regulated gene comprises a stress-regulated regulatory element. The stress-regulated

regulatory element can integrate into the plant cell genome in a site-specific manner, whereupon it can be operatively linked to an endogenous nucleotide sequence, which can be expressed in response to a stress condition specific for the regulatory element; or can be a mutant regulatory element, which is not responsive to the stress condition, whereby upon integrating into the plant cell genome, the mutant regulatory element disrupts an endogenous stress-regulated regulatory element of a plant stress-regulated gene, thereby altering the responsiveness of the plant stress-regulated gene to the stress condition. Accordingly, the invention also provides genetically modified plants, including transgenic plants, produced by such a method, and a plant cell obtained from such genetically modified plant, wherein said plant cell exhibits altered responsiveness to the stress condition; a seed produced by a transgenic plant; and a cDNA library prepared from a transgenic plant.

Also provided is a method of modulating the responsiveness of a plant cell to a stress condition. Such a method can be performed, for example, by introducing a polynucleotide portion of a plant stress-regulated gene into the plant cell, thereby modulating the responsiveness of the plant cell to a stress condition. As disclosed herein, the responsiveness of the plant cell can be increased or decreased upon exposure to the stress condition, and the altered responsiveness can result in increased or decreased tolerance of the plant cell to a stress condition. The polynucleotide portion of the plant stress-regulated gene can, but need not, be integrated into the genome of the plant cell, thereby modulating the responsiveness of the plant cell to the stress condition. Accordingly, the invention also provide a genetically modified plant, including a transgenic plant, which contains an introduced polynucleotide portion of a plant stress-regulated gene, as well as plant cells, tissues, and the like, which exhibit modulated responsiveness to a stress condition.

The polynucleotide portion of the plant stress-regulated gene can encode a stress-regulated polypeptide or functional peptide portion thereof, which can be operatively linked to a heterologous promoter. As used herein, reference to a "functional peptide portion of a plant stress-regulated polypeptide" means a contiguous amino acid sequence of the polypeptide that has an activity of the full length polypeptide, or that has an antagonist activity with respect to the full length polypeptide, or that presents an epitope unique to the polypeptide. Thus, by

expressing a functional peptide portion of a plant stress-regulated polypeptide in a plant cell, the peptide can act as an agonist or an antagonist of the polypeptide, thereby modulating the responsiveness of the plant cell to a stress condition.

A polynucleotide portion of the plant stress-regulated nucleotide sequence also
5 can contain a mutation, whereby upon integrating into the plant cell genome, the polynucleotide disrupts (knocks-out) an endogenous plant stress-regulated nucleotide sequence, thereby modulating the responsiveness of said plant cell to the stress condition. Depending on whether the knocked-out gene encodes an adaptive or a maladaptive stress-regulated polypeptide, the responsiveness of the plant will be
10 modulated accordingly. Thus, a method of the invention provides a means of producing a transgenic plant having a knock-out phenotype of a plant stress-regulated nucleotide sequence.

Alternatively, the responsiveness of a plant or plant cell to a stress condition can be modulated by use of a suppressor construct containing dominant negative
15 mutation for any of the stress-regulated sequences described herein. Expression of a suppressor construct containing a dominant mutant mutation generates a mutant transcript that, when coexpressed with the wild-type transcript inhibits the action of the wild-type transcript. Methods for the design and use of dominant negative constructs are well known (see, for example, in Herskowitz, Nature 329:219-222,
20 1987; Lagna and Hemmati-Brivanlou, Curr. Topics Devel. Biol. 36:75-98, 1998).

The polynucleotide portion of the plant stress-regulated gene also can comprise a stress-regulated regulatory element, which can be operatively linked to a heterologous nucleotide sequence, which, upon expression from the regulatory element in response to a stress condition, modulates the responsiveness of the plant
25 cell to the stress condition. Such a heterologous nucleotide sequence can encode, for example, a stress-inducible transcription factor such as DREB1A, which, upon exposure to the stress condition, is expressed such that it can amplify the stress response (see Kasuga et al., *supra*, 1999). The heterologous nucleotide sequence also can encode a polynucleotide that is specific for a plant stress-regulated gene, for
30 example, an antisense molecule, a ribozyme, and a triplexing agent, either of which, upon expression in the plant cell, reduces or inhibits expression of a stress-regulated polypeptide encoded by the gene, thereby modulating the responsiveness of the plant

cell to a stress condition, for example, an abnormal level of cold, osmotic pressure, and salinity. As used herein, the term "abnormal," when used in reference to a condition such as temperature, osmotic pressure, salinity, or any other condition that can be a stress condition, means that the condition varies sufficiently from a range
5 generally considered optimum for growth of a plant that the condition results in an induction of a stress response in a plant. Methods of determining whether a stress response has been induced in a plant are disclosed herein or otherwise known in the art.

A plant stress-regulated regulatory element can be operatively linked to a
10 heterologous polynucleotide sequence, such that the regulatory element can be introduced into a plant genome in a site-specific matter by homologous recombination. For example, a mutant plant stress-regulated regulatory element for a maladaptive stress-induced polypeptide can be transformed into a plant genome in a site specific manner by *in vivo* mutagenesis, using a hybrid RNA-DNA oligonucleotide
15 ("chimeroplast" (TIBTECH 15:441- 447, 1997; WO 95/15972; Kren, Hepatology 25:1462-1468, 1997; Cole-Strauss, Science 273:1386-1389, 1996, each of which is incorporated herein by reference). Part of the DNA component of the RNA-DNA oligonucleotide is homologous to a nucleotide sequence comprising the regulatory element of the maladaptive gene, but includes a mutation or contains a heterologous
20 region which is surrounded by the homologous regions. By means of base pairing of the homologous regions of the RNA-DNA oligonucleotide and of the endogenous nucleic acid molecule, followed by a homologous recombination the mutation contained in the DNA component of the RNA-DNA oligonucleotide or the heterologous region can be transferred to the plant genome, resulting in a "mutant"
25 gene that, for example, is not induced in response to a stress and, therefore, does not confer the maladaptive phenotype. Such a method similarly can be used to knock-out the activity of a stress-regulated gene, for example, in an undesirable plant. Such a method can provide the advantage that a desirable wild-type plant need not compete with the undesirable plant, for example, for light, nutrients, or the like.

30 A method of modulating the responsiveness of a plant cell to a stress condition also can be performed by introducing a mutation in the chromosomal copy of a plant stress-regulated gene, for example, in the stress-regulated regulatory element, by

transforming a cell with a chimeric oligonucleotide composed of a contiguous stretch of RNA and DNA residues in a duplex conformation with double hairpin caps on the ends. An additional feature of the oligonucleotide is the presence of 2'-O- methylation at the RNA residues. The RNA/DNA sequence is designed to align with the sequence of a chromosomal copy of the target regulatory element and to contain the desired nucleotide change (see U.S. Pat. No. 5,501,967, which is incorporated herein by reference).

A plant stress-regulated regulatory element also can be operatively linked to a heterologous polynucleotide such that, upon expression from the regulatory element in the plant cell, confers a desirable phenotype on the plant cell. For example, the heterologous polynucleotide can encode an aptamer, which can bind to a stress-induced polypeptide. Aptamers are nucleic acid molecules that are selected based on their ability to bind to and inhibit the activity of a protein or metabolite. Aptamers can be obtained by the SELEX (Systematic Evolution of Ligands by Exponential Enrichment) method (see U.S. Pat. No. 5,270,163), wherein a candidate mixture of single stranded nucleic acids having regions of randomized sequence is contacted with a target, and those nucleic acids having a specific affinity to the target are partitioned from the remainder of the candidate mixture, and amplified to yield a ligand enriched mixture. After several iterations a nucleic acid molecule (aptamer) having optimal affinity for the target is obtained. For example, such a nucleic acid molecule can be operatively linked to a plant stress-regulated regulatory element and introduced into a plant. Where the aptamer is selected for binding to a polypeptide that normally is expressed from the regulatory element and is involved in an adaptive response of the plant to a stress, the recombinant molecule comprising the aptamer can be useful for inhibiting the activity of the stress-regulated polypeptide, thereby decreasing the tolerance of the plant to the stress condition.

The invention provides a genetically modified plant, which can be a transgenic plant, that is tolerant or resistant to a stress condition. As used herein, the term "tolerant" or "resistant," when used in reference to a stress condition of a plant, means that the particular plant, when exposed to a stress condition, shows less of an effect, or no effect, in response to the condition as compared to a corresponding reference plant (naturally occurring wild-type plant or a plant not containing a construct of the

present invention). As a consequence, a plant encompassed within the present invention grows better under more widely varying conditions, has higher yields and/or produces more seeds. Thus, a transgenic plant produced according to a method of the invention can demonstrate protection (as compared to a corresponding reference plant) from a delay to complete inhibition of alteration in cellular metabolism, or reduced cell growth or cell death caused by the stress. Preferably, the transgenic plant is capable of substantially normal growth under environmental conditions where the corresponding reference plant shows reduced growth, metabolism or viability, or increased male or female sterility.

10 The determination that a plant modified according to a method of the invention has increased resistance to a stress-inducing condition can be made by comparing the treated plant with a control (reference) plant using well known methods. For example, a plant having increased tolerance to saline stress can be identified by growing the plant on a medium such as soil, which contains a higher
15 content of salt in the order of at least about 10% compared to a medium the corresponding reference plant is capable of growing on. Advantageously, a plant treated according to a method of the invention can grow on a medium or soil containing at least about 50%, or more than about 75%, particularly at least about more than 100%, and preferably more than about 200% salt than the medium or soil
20 on which a corresponding reference plant can grow. In particular, such a treated plant can grow on medium or soil containing at least 40 mM, generally at least 100 mM, particularly at least 200 mM, and preferably at least 300 mM salt, including, for example, a water soluble inorganic salt such as sodium sulfate, magnesium sulfate, calcium sulfate, sodium chloride, magnesium chloride, calcium chloride, potassium
25 chloride, or the like; salts of agricultural fertilizers, and salts associated with alkaline or acid soil conditions; particularly NaCl.

 In another embodiment, the invention provides a plant that is less tolerant or less resistant to a stress condition as compared to a corresponding reference plant. As used herein, the term "less tolerant" or "less resistant," when used in reference to a
30 stress condition of a plant, means that the particular plant, when exposed to a stress condition, shows an alteration in response to the condition as compared to a corresponding reference plant. As a consequence, such a plant, which generally is an

undesirable plant species, is less likely to grow when exposed to a stress condition than an untreated plant.

The present invention also relates to a method of expressing a heterologous nucleotide sequence in a plant cell. Such a method can be performed, for example, by
5 introducing into the plant cell a plant stress-regulated regulatory element operatively linked to the heterologous nucleotide sequence, whereby, upon exposure of the plant cell to stress condition, the heterologous nucleotide sequence is expressed in the plant cell. The heterologous nucleotide sequence can encode a selectable marker, or preferably, a polypeptide that confers a desirable trait upon the plant cell, for example,
10 a polypeptide that improves the nutritional value, digestibility or ornamental value of the plant cell, or a plant comprising the plant cell. Accordingly, the invention provides a transgenic plant that, in response to a stress condition, can produce a heterologous polypeptide from a plant stress-regulated regulatory element. Such transgenic plants can provide the advantage that, when grown in a cold environment for example, expression
15 of the heterologous polypeptide from a plant cold-regulated regulatory element can result in increased nutritional value of the plant.

The present invention further relates to a method of modulating the activity of a biological pathway in a plant cell, wherein the pathway involves a stress-regulated polypeptide. As used herein, reference to a pathway that "involves" a stress-regulated
20 polypeptide means that the polypeptide is required for normal function of the pathway. For example, plant stress-regulated polypeptides as disclosed herein include those acting as kinases or as transcription factors, which are well known to be involved in signal transduction pathways. As such, a method of the invention provides a means to modulate biological pathways involving plant stress-regulated
25 polypeptides, for example, by altering the expression of the polypeptides in response to a stress condition. Thus, a method of the invention can be performed, for example, by introducing a polynucleotide portion of a plant stress-regulated gene into the plant cell, thereby modulating the activity of the biological pathway.

A method of the invention can be performed with respect to a pathway
30 involving any of the stress-regulated polypeptides as encoded by a polynucleotide of SEQ ID NOS:1-2703, including for example, a stress-regulated transcription factor, an enzyme, including a kinase, a channel protein (see, for example, Tables 29-31; see,

also, Table 1). Pathways in which the disclosed stress-regulated stress factors are involved can be identified, for example, by searching the Munich Information Center for Protein Sequences (MIPS) *Arabidopsis thaliana* database (MATDB), which is at <http://www.mips.biochem.mpg.de/proj/thal/>.

5 The present invention also relates to a method of identifying a polynucleotide that modulates a stress response in a plant cell. Such a method can be performed, for example, by contacting an array of probes representative of a plant cell genome and nucleic acid molecules expressed in plant cell exposed to the stress; detecting a nucleic acid molecule that is expressed at a level different from a level of expression
10 in the absence of the stress; introducing the nucleic acid molecule that is expressed differently into a plant cell; and detecting a modulated response of the plant cell containing the introduced nucleic acid molecule to a stress, thereby identifying a polynucleotide that modulates a stress response in a plant cell. The contacting is under conditions that allow for selective hybridization of a nucleic acid molecule with
15 probe having sufficient complementarity, for example, under stringent hybridization conditions.

As used herein, the term "array of probes representative of a plant cell genome" means an organized group of oligonucleotide probes that are linked to a solid support, for example, a microchip or a glass slide, wherein the probes can
20 hybridize specifically and selectively to nucleic acid molecules expressed in a plant cell. Such an array is exemplified herein by a GeneChip® *Arabidopsis* Genome Array (Affymetrix; see Example 1). In general, an array of probes that is "representative" of a plant genome will identify at least about 30% or the expressed nucleic acid molecules in a plant cell, generally at least about 50% or 70%, particularly at least
25 about 80% or 90%, and preferably will identify all of the expressed nucleic acid molecules. It should be recognized that the greater the representation, the more likely all nucleotide sequences of cluster of stress-regulated genes will be identified.

A method of the invention is exemplified in Example 1, wherein clusters of *Arabidopsis* genes induced to cold, to increased salinity, to increased osmotic
30 pressure, and to a combination of the above three stress conditions were identified. Based on the present disclosure, the artisan readily can obtain nucleic acid samples for *Arabidopsis* plants exposed to other stress conditions, or combinations of stress

conditions, and identify clusters of genes induced in response to the stress conditions. Similarly, the method is readily adaptable to identifying clusters of stress-regulated genes expressed in other plant species, particularly commercially valuable plant species, where a substantial amount of information is known regarding the genome.

5 The clusters of genes identified herein include those clusters of genes that are induced or repressed in response to a combination of stress conditions, but not to any of the stress conditions alone; and clusters of genes that are induced or repressed in response to a selected stress condition, but not to other stress conditions tested. Furthermore, clusters of genes that respond to a stress condition in a temporally
10 regulated manner are also included, such as gene clusters that are induced early (for example, within about 3 hours), late (for example, after about 8 to 24 hours), or continuously in a stress response. In addition, the genes within a cluster are represented by a variety of cellular proteins, including transcription factors, enzymes such as kinases, channel proteins, and the like (see Tables 1 and 29-31). Thus, the
15 present invention further characterizes nucleotide sequences that previously were known to encode cellular peptides by classifying them within clusters of stress-regulated genes.

 The present invention additionally relates to a method of identifying a stress condition to which a plant cell was exposed. Such a method can be performed, for
20 example, by contacting nucleic acid molecules expressed in the plant cell and an array of probes representative of the plant cell genome; and detecting a profile of expressed nucleic acid molecules characteristic of a stress response, thereby identifying the stress condition to which the plant cell was exposed. The contacting generally is under conditions that allow for selective hybridization of a nucleic acid molecule with
25 probe having sufficient complementarity, for example, under stringent hybridization conditions. The profile can be characteristic of exposure to a single stress condition, for example, an abnormal level of cold, osmotic pressure, or salinity (Tables 3-14), or can be characteristic of exposure to more than one stress condition (Tables 15-26, for example, cold, increased osmotic pressure and increased salinity (see Tables 24-26).

30 The method can be practiced using at least one nucleic acid probe and can identify one or combination of stress conditions by detecting altered expression of one or a plurality of polynucleotides representative of plant stress-regulated genes. As

used herein, the term "at least one" includes one, two, three or more, for example, five, ten, twenty, fifty or more polynucleotides, nucleic acid probes, and the like. The term "plurality" is used herein to mean two or more, for example, three, four, five or more, including ten, twenty, fifty or more polynucleotides, nucleic acid probes, and
5 the like.

In a method of the invention, nucleic acid samples from the plant cells to be collected can be contacted with an array, then the profile can be compared with known expression profiles prepared from nucleic acid samples of plants exposed to a known stress condition or combination of stress conditions. By creating a panel of
10 such profiles, representative of various stress conditions, an unknown stress condition to which a plant was exposed can be identified simply by comparing the unknown profile with the known profiles and determining which known profile that matches the unknown profile. Preferably, the comparison is automated. Such a method can be useful, for example, to identify a cause of damage to a crop, where the condition
15 causing the stress is not known or gradually increases over time. For example, accumulation in soils over time of salts from irrigation water can result in gradually decreasing crop yields. Because the accumulation is gradual, the cause of the decreased yield may not be readily apparent. Using the present methods, it is possible to evaluate the stress to which the plants are exposed, thus revealing the cause of the
20 decreased yields.

The present invention, therefore includes a computer readable medium containing executable instructions for receiving expression data for sequences substantially similar to any of those disclosed herein and comparing expression data from a test plant to a reference plant that has been exposed to an abiotic stress. Also
25 provided is a computer-readable medium containing sequence data for sequences substantially similar to any of the sequences described herein, or the complements thereof, and a module for comparing such sequences to other nucleic acid sequences.

Also provided are plants and plant cells comprising plant stress-regulatory elements of the present invention operably linked to a nucleotide sequence encoding a
30 detectable signal. Such plants can be used as diagnostic or "sentinel" plants to provide early warning that nearby plants are being stressed so that appropriate actions can be taken. In one embodiment, the signal is one that alters the appearance of the

plant. For example, an osmotic stress regulatory element of the present invention can be operably linked to a nucleotide sequence encoding a fluorescent protein such as green fluorescent protein. When subjected to osmotic stress, the expression of the green fluorescent protein in the sentinel plant provides a visible signal so that appropriate actions can be taken to remove or alleviate the stress. The use of fluorescent proteins in plants is well known (see, for example, in Leffel et al., BioTechniques 23:912, 1997).

The invention further relates to a method of identifying an agent that modulates the activity of a stress-regulated regulatory element of a plant. As used herein, the term "modulate the activity," when used in reference to a plant stress-regulated regulatory element, means that expression of a polynucleotide from the regulatory element is increased or decreased. In particular, expression can be increased or decreased with respect to the basal activity of the promoter, i.e., the level of expression, if any, in the absence of a stress condition that normally induces expression from the regulatory element; or can be increased or decreased with respect to the level of expression in the presence of the inducing stress condition. As such, an agent can act as a mimic of a stress condition, or can act to modulate the response to a stress condition.

Such a method can be performed, for example, by contacting the regulatory element with an agent suspected of having the ability to modulate the activity of the regulatory element, and detecting a change in the activity of the regulatory element. In one embodiment, the regulatory element can be operatively linked to a heterologous polynucleotide encoding a reporter molecule, and an agent that modulates the activity of the stress-regulated regulatory element can be identified by detecting a change in expression of the reporter molecule due to contacting the regulatory element with the agent. Such a method can be performed *in vitro* in a plant cell-free system, or in a plant cell in culture or in a plant *in situ*.

A method of the invention also can be performed by contacting the agent is contacted with a genetically modified cell or a transgenic plant containing an introduced plant stress-regulated regulatory element, and an agent that modulates the activity of the regulatory element is identified by detecting a phenotypic change in the modified cell or transgenic plant.

A method of the invention can be performed in the presence or absence of the stress condition to which the particularly regulatory element is responsive. As such, the method can identify an agent that modulates the activity of plant stress-regulated promoter in response to the stress, for example, an agent that can enhance the stress response or can reduce the stress response. In particular, a method of the invention can identify an agent that selectively activates the stress-regulated regulatory elements of a cluster of plant stress-regulated genes, but does not affect the activity of other stress-regulated regulatory genes. As such, the method provides a means to identify an agent that acts as a stress mimic. Such agents can be particularly useful to prepare a plant to an expected stress condition. For example, an agent that acts as a cold mimic can be applied to a field of plants prior to the arrival of an expected cold front. Thus, the cold stress response can be induced prior to the actual cold weather, thereby providing the plants with the protection of the stress response, without the plants suffering from any initial damage due to the cold. Similarly, an osmotic pressure mimic can be applied to a crop of plants prior a field being flooded by a rising river.

In one embodiment, the present invention provides a method for marker-assisted selection. Marker-assisted selection involves the selection of plants having desirable phenotypes based on the presence of particular nucleotide sequences ("markers"). The use of markers allows plants to be selected early in development, often before the phenotype would normally be manifest. Because it allows for early selection, marker-assisted selection decreases the amount of time need for selection and thus allows more rapid genetic progress.

Briefly, marker-assisted selection involves obtaining nucleic acid from a plant to be selected. The nucleic acid obtained is then probed with probes that selectively hybridize under stringent, preferably highly stringent, conditions to a nucleotide sequence or sequences associated with the desired phenotype. In one embodiment, the probes hybridize to any of the stress-responsive genes or regulatory regions disclosed herein, for example, any one of SEQ ID NOS:1-2703. The presence of any hybridization products formed is detected and plants are then selected on the presence or absence of the hybridization products.

The following examples are intended to illustrate but not limit the invention.

EXAMPLE 1**PROFILING OF PLANT STRESS-REGULATED GENES**

This example demonstrates that clusters of stress-regulated genes can be identified in plant cells exposed to various stress conditions, either alone or in
5 combination.

A GeneChip® Arabidopsis Genome Array (Affymetrix, Santa Clara, CA) was used to identify clusters of genes that were coordinately induced in response to various stress conditions. The GeneChip® Arabidopsis Genome Array contains probes synthesized *in situ* and is designed to measure temporal and spatial gene
10 expression of approximately 8700 genes in greater than 100 EST clusters. The sequences used to develop the array were obtained from GenBank (<http://www.ncbi.nlm.nih.gov/>) in collaboration with Torrey Mesa Research Institute (San Diego, CA), formerly known as Novartis Agriculture Discovery Institute. Eighty percent of the nucleotide sequences represented on the array are predicted
15 coding sequences from genomic BAC entries; twenty percent are high quality cDNA sequences. The array also contains over 100 EST clusters that share homology with the predicted coding sequences from BAC clones (see, for example, world wide web at address (url) "affymetrix.com/products/Arabidopsis_content.html").

The Affymetrix GeneChip® array was used to define nucleotide sequences/
20 pathways affected by various abiotic stresses and to define which are uniquely regulated by one stress and those that respond to multiple stress, and to identify candidate nucleotide sequences for screening for insertional mutants. Of the approximately 8,700 nucleotide sequences represented on the Affymetrix GeneChip® array, 2862 nucleotide sequences showed at least a 2-fold change in expression in at
25 least one sample, relative to no-treatment controls. Of those 2,862 nucleotide sequences 1,335 were regulated only by cold stress, 166 were regulated only mannitol stress and 209 were regulated only by saline stress. Furthermore, of the 2,862 nucleotide sequences 123 nucleotide sequences were regulated by salt and mannitol stress, 293 were regulated by mannitol and cold stress, 274 were regulated
30 by cold and saline stress and 462 were regulated by cold, mannitol and salt. Of the 2,862 nucleotide sequences, 771 passed the higher stringency of showing at least a

2-fold change in expression in at least 2 samples, relative to control. And, 508 of the 771 nucleotide sequences were found in an in-house collection of insertion mutants.

The following describes in more detail how the experiments were done.

Transcriptional profiling was performed by hybridizing fluorescence labeled cRNA with
5 the oligonucleotides probes on the chip, washing, and scanning. Each gene is represented on the chip by about sixteen oligonucleotides (25-mers). Expression level is related to fluorescence intensity. Starting material contained 1 to 10 Tg total RNA; detection specificity was about $1:10^6$; approximately a 2-fold change was detectable, with less than 2% false positive; the dynamic range was approximately 500x.
10 Nucleotide sequences having up to 70% to 80% identity could be discriminated using this system.

Seven day old axenic *Arabidopsis* seedlings were transferred to Magenta boxes with rafts floating on MS medium. Three weeks later (28 day old seedlings), stresses were applied as follows: Control - no treatment; Cold - Magenta box placed in ice;
15 Mannitol - medium + 200 mM mannitol; Salt - medium + 100 mM NaCl. Tissue samples were collected at 3 hours and 27 hours into the stress, roots and aerial portions were harvested, RNA was purified, and the samples were analyzed using the GeneChip® *Arabidopsis* Genome Array (Affymetrix, Santa Clara, CA) following the manufacturer's protocol.

20 Raw fluorescence values as generated by Affymetrix software were processed as follows: the values were brought into Microsoft Excel and values of 25 or less were set to 25 (an empirically determined baseline, Zhu and Wang, Plant Physiol. 124:1472-1476; 2000). The values from the stressed samples were then converted to fold change relative to control by dividing the values from the stressed samples by the values from
25 the no-treatment control samples. Expression patterns that were altered at least 2-fold with respect to the control were selected. This method gave very robust results and resulted in a larger number of nucleotide sequences called as stress-regulated than previous methods had permitted.

Based on the profiles obtained following hybridization of nucleic acid molecules
30 obtained from plant cells exposed to various stress conditions to the probes in the microarray, clusters of nucleotide sequences that were altered in response to the stress

conditions were identified (see Tables 3-6, cold responsive; Tables 7-10, salt (saline) responsive; Tables 11 to 14, mannitol (osmotic) responsive; Tables 15-17, cold and mannitol responsive; Tables 18-20, 6 salt and cold responsive; Tables 21-23, salt and mannitol responsive; Tables 24-26, cold, salt and mannitol responsive. Examples of
5 plant gene sequences that varied in expression at least two-fold in response to a combination of cold, saline and osmotic stress in root cells and leaf cells are shown in Tables 27 and 28, respectively. In addition, examples of plant gene sequences that encode transcription factors (Table 29), phosphatases (Table 30), and kinases (Table 31) and that varied at least two-fold in response to a combination of cold, saline and osmotic
10 stress are provided.

Affymetrix ID numbers and corresponding SEQ ID NOS: for the respective *Arabidopsis* nucleotide sequences are provided Tables 3-26, and can be used to determine SEQ ID NOS: for the sequences shown by Affymetrix ID number in Tables 27-31. The Affymetrix ID number refers to a particular nucleotide sequence on
15 the GeneChip® *Arabidopsis* Genome Array. In some cases, a particular plant stress-regulated gene sequence hybridized to more than one nucleotide sequence on the GeneChip® *Arabidopsis* Genome Array (see, for example, Table 3, where SEQ ID NO:36 is shown to have hybridized to the 12187_AT and 15920_I_AT nucleotide sequences on the GeneChip®). In addition, it should be recognized that the disclosed
20 sequences are not limited to coding sequences but, in some cases, include 5' untranslated sequences (see Table 2) or a longest coding region. As such, while the sequences set forth as SEQ ID NOS:1-2073 generally start with an ATG codon, in most cases each comprises a longer nucleotide sequence, including a regulatory region (see Table 2).

The results disclosed herein demonstrate that several polynucleotides, some of
25 which were known to function as transcription factors, enzymes, and structural proteins, also are involved in the response of a plant cell to stress. The identification of the clusters of stress-regulated genes as disclosed herein provides a means to identify stress-regulated regulatory elements present in *Arabidopsis thaliana* nucleotide sequences, including consensus regulatory elements. It should be recognized, however that the
30 regulatory elements of the plant genes comprising a sequence as set forth in SEQ ID NOS:156, 229, 233, 558, 573, 606, 625, 635, 787, and 813, which previously have

been described as cold regulated genes, are not encompassed within the stress-regulated gene regulatory element of the invention, and the regulatory elements of the plant genes comprising the nucleotide sequences set forth as SEQ ID NOS:1263, 1386, 1391, 1405, 1445, 1484, 1589, 1609, 1634, 1726, 1866, 1918, and 1928, which
5 previously have been identified as genes that are responsive to a single stress condition such as cold or saline stress, are not encompassed within the plant stress-regulated gene regulatory elements of the invention to the extent that they confer stress-regulated expression only with respect to the known single stress. Furthermore, the identification of the *Arabidopsis* stress-regulated genes provides a means to identify
10 the corresponding homologs and orthologs in other plants, including commercially valuable food crops such as wheat, rice, soy, and barley, and ornamental plants. BLASTN and BLASTP searches to identify such sequences revealed the polynucleotide sequences set forth in Table 32.

Although the invention has been described with reference to the above example,
15 it will be understood that modifications and variations are encompassed within the spirit and scope of the invention. Accordingly, the invention is limited only by the claims, which follow Tables 1 to 32.

TABLE 1

| SEQUENCE DESCRIPTIONS | | | |
|-----------------------|------------------------------------|--------|--|
| Seq ID | Description | Seq ID | Description |
| 1 | unknown protein | 41 | scarecrow-like 7 (SCL7) |
| 2 | unknown protein | 42 | putative protein |
| 3 | unknown protein | 43 | No function assigned by TIGR |
| 4 | putative auxin-induced protein | 44 | unknown protein |
| 5 | unknown protein | 45 | unknown protein |
| 6 | hypothetical protein | 46 | succinyl-CoA-ligase alpha subunit |
| 7 | putative protein | 47 | putative protein |
| 8 | unknown protein | 48 | CLV1 receptor kinase like protein |
| 9 | unknown protein | 49 | putative receptor-like protein kinase |
| 10 | unknown protein | 50 | putative squalene synthase |
| 11 | putative protein | 51 | putative receptor protein kinase |
| 12 | Thioredoxin - like protein | 52 | somatic embryogenesis receptor-like kinase, putative |
| 13 | putative RNA helicase | 53 | putative protein |
| 14 | putative protein | 54 | putative beta-glucosidase |
| 15 | putative protein | 55 | multi-drug resistance protein |
| 16 | RING zinc finger protein, putative | 56 | receptor protein kinase (TMK1), putative |
| 17 | putative cyclin | 57 | putative receptor-like protein kinase |
| 18 | putative protein | 58 | putative pectate lyase |
| 19 | putative protein | 59 | putative protein kinase |
| 20 | unknown protein | 60 | putative peroxidase |
| 21 | putative protein | 61 | cytochrome P450-like protein |
| 22 | putative protein | 62 | putative beta-amylase |
| 23 | hypothetical protein | 63 | monosaccharide transporter STP3 |
| 24 | unknown protein | 64 | Lycopersicon esculentum proteinase TMP, Pir2:T07617 |
| 25 | hypothetical protein | 65 | putative receptor-like protein kinase |
| 26 | unknown protein | 66 | G-box-binding factor 1 |
| 27 | unknown protein | 67 | amino acid carrier, putative |
| 28 | unknown protein | 68 | myb-related protein |
| 29 | unknown protein | 69 | No function assigned by TIGR |
| 30 | putative protein | 70 | SNF1 like protein kinase |
| 31 | putative protein | 71 | Cu/Zn superoxide dismutase-like protein |
| 32 | putative protein | 72 | putative protein kinase |
| 33 | unknown protein | 73 | small nuclear ribonucleoprotein U1A |
| 34 | putative ribonuclease III | | |
| 35 | unknown protein | | |
| 36 | unknown protein | | |
| 37 | unknown protein | | |
| 38 | unknown protein | | |
| 39 | unknown protein | | |
| 40 | putative histidine kinase | | |

TABLE 1 (cont)

| | | | |
|-----|---|-----|---|
| 74 | ras-like GTP-binding protein | 101 | dynein light chain like protein |
| 75 | oleoyl-[acyl-carrier-protein] hydrolase-like protein | 102 | chaperonin CPN10 |
| 76 | putative heat shock transcription factor | 103 | putative bHLH transcription factor |
| 77 | putative protein | 104 | putative glyoxysomal malate dehydrogenase precursor |
| 78 | membrane-bound small GTP-binding - like protein | 105 | ATP-dependent RNA helicase, putative |
| 79 | putative protein (fragment) | 106 | chlorophyll synthetase |
| 80 | indole-3-acetate beta-glucosyltransferase like protein | 107 | similar to epoxide hydrolases |
| 81 | HD-zip transcription factor (athb-8) | 108 | putative protein |
| 82 | putative cAMP-dependent protein kinase | 109 | unknown protein |
| 83 | glucuronosyl transferase-like protein | 110 | hypothetical protein |
| 84 | putative leucine-rich repeat disease resistance protein | 111 | putative membrane transporter |
| 85 | 98b like protein | 112 | putative tyrosyl-tRNA synthetase |
| 86 | putative receptor-like protein kinase | 113 | ARGININE/SERINE-RICH SPLICING FACTOR RSP31 |
| 87 | IAA-Ala hydrolase (IAR3) | 114 | putative oxidoreductase |
| 88 | putative AP2 domain transcription factor | 115 | unknown protein |
| 89 | putative expansin | 116 | linker histone protein, putative |
| 90 | putative Ap2 domain protein | 117 | hypothetical protein |
| 91 | expansin (At-EXP1) | 118 | putative protein |
| 92 | cytochrome P450 - like protein | 119 | putative mitochondrial carrier protein |
| 93 | putative ATP-dependent RNA helicase A | 120 | putative transcription factor |
| 94 | unknown protein | 121 | MYB-related protein |
| 95 | predicted protein | 122 | myb-related transcription factor, putative |
| 96 | putative glucosyltransferase | 123 | unknown protein |
| 97 | unknown protein | 124 | unknown protein |
| 98 | putative xyloglucan-specific glucanase | 125 | putative glycine-rich protein |
| 99 | cysteine synthase | 126 | No function assigned by TIGR |
| 100 | clathrin assembly protein AP19 homolog | 127 | unknown protein |
| | | 128 | unknown protein |
| | | 129 | unknown protein |
| | | 130 | unknown protein |
| | | 131 | putative membrane channel protein |
| | | 132 | putative protein |
| | | 133 | unknown protein |
| | | 134 | gamma glutamyl hydrolase, putative |
| | | 135 | 40S ribosomal protein S5 |
| | | 136 | DnaJ-like protein |
| | | 137 | 40S ribosomal protein S26 |
| | | 138 | putative WRKY-type DNA binding protein |

TABLE 1 (cont)

| | | | |
|-----------|---|-----|--|
| 139 | putative protein | 161 | putative photomorphogenesis repressor protein |
| 140 | hypothetical protein | 162 | SNF1-like protein kinase (AKin11) |
| 141 | putative ubiquitin-conjugating enzyme | 163 | thioredoxin h |
| 142 | peptidylprolyl isomerase | 164 | thioredoxin |
| ROC1 | | 165 | Ca ²⁺ -dependent lipid-binding protein, putative |
| 143 | glyceraldehyde-3-phosphate dehydrogenase C subunit (GapC) | 166 | putative auxin-induced protein |
| 144 | No function assigned by | 167 | putative bZIP transcription factor |
| TIGR | | 168 | hypothetical protein |
| 145 | putative protein | 169 | putative AVR9 elicitor response protein |
| 146 | putative thioredoxin | 170 | putative serine/threonine protein kinase |
| 147 | thioredoxin h, putative | 171 | bZIP transcription factor ATB2 |
| 148 | thioredoxin-like | 172 | putative spliceosome associated protein |
| 149 | allene oxide synthase (emb CAA73184.1) | 173 | 3-hydroxyisobutyryl-coenzyme A hydrolase - like protein |
| 150 | anthranilate synthase component I-1 precursor (sp P32068) | 174 | putative protein |
| 151 | CELL DIVISION CONTROL PROTEIN 2 HOMOLOG A | 175 | putative Mutator-like transposase |
| 152 | protein kinase cdc2 | 176 | putative protein |
| homolog B | | 177 | unknown protein |
| 153 | ethylene responsive element binding factor 1 (frameshift !) | 178 | putative protein |
| 154 | ethylene responsive element binding factor 2 (ATERF2) (sp O80338) | 179 | putative protein |
| 155 | ethylene responsive element binding factor 5 (ATERF5) (sp O80341) | 180 | putative galactinol synthase |
| 156 | glucose-6-phosphate dehydrogenase | 181 | putative transcriptional regulator |
| 157 | photomorphogenesis repressor (COP1) | 182 | nuclear matrix constituent protein 1 (NMCP1)-like |
| 158 | unknown protein | 183 | putative DNA-binding protein RAV2 |
| 159 | DNA (cytosine-5)-methyltransferase (DNA methyltransferase) (DNA metase) (sp P34881) | 184 | No function assigned by TIGR |
| 160 | PROLIFERA | 185 | basic blue protein, 5' partial |
| | | 186 | unknown protein |
| | | 187 | putative calcium-binding protein, calreticulin |
| | | 188 | putative pyrophosphate-fructose-6-phosphate 1-phosphotransferase |
| | | 189 | ribosomal protein L11, cytosolic |
| | | 190 | putative dTDP-glucose 4-6-dehydratase |
| | | 191 | 40S ribosomal protein S20-like protein |
| | | 192 | 60S ribosomal protein L24 |

TABLE 1 (cont)

| | | | |
|-----|--|-----|--|
| 193 | coatomer-like protein, epsilon subunit | 223 | putative SF16 protein {Helianthus annuus} |
| 194 | glycoprotein(EP1), putative | 224 | unknown protein |
| 195 | putative SPL1-related protein | 225 | thioredoxin |
| 196 | unknown protein | 226 | trehalose-6-phosphate phosphatase (AtTPPB) |
| 197 | putative transport protein SEC61 beta-subunit | 227 | chlorophyll a/b-binding protein |
| 198 | unknown protein | 228 | class IV chitinase (CHIV) |
| 199 | putative cytochrome P450 | 229 | chalcone synthase (naringenin-chalcone synthase) (testa 4 protein) (sp P13114) |
| 200 | UTP-glucose glucosyltransferase - like protein | 230 | unknown protein |
| 201 | 60S ribosomal protein L23 | 231 | cinnamyl-alcohol dehydrogenase ELI3-2 |
| 202 | 40S ribosomal protein S17 | 232 | farnesyl-pyrophosphate synthetase FPS2 |
| 203 | 40S ribosomal protein S26 | 233 | phospholipid hydroperoxide glutathione peroxidase |
| 204 | protein translation factor Sui1 homolog, putative | 234 | heat shock transcription factor HSF4 |
| 205 | unknown protein | 235 | heat shock protein 101 |
| 206 | gamma glutamyl hydrolase, putative | 236 | 17.6 kDa heat shock protein (AA 1-156) |
| 207 | dTDP-glucose 4,6-dehydratase, putative | 237 | heat shock protein 17.6A |
| 208 | extensin - like protein | 238 | heat-shock protein |
| 209 | unknown protein | 239 | HY5 |
| 210 | protein phosphatase 2C - like protein | 240 | putative auxin-induced protein, IAA12 |
| 211 | ubiquitin-like protein | 241 | early auxin-induced protein, IAA19 |
| 212 | protein phosphatase 2C-like protein | 242 | auxin-inducible gene (IAA2) |
| 213 | unknown protein | 243 | putative protein |
| 214 | putative RING zinc finger ankyrin protein | 244 | putative choline kinase |
| 215 | unknown protein | 245 | thymidylate kinase - like protein |
| 216 | putative rubisco subunit binding-protein alpha subunit | 246 | CTP synthase like protein |
| 217 | putative acetone-cyanohydrin lyase | 247 | putative protein |
| 218 | putative isoamylase | 248 | putative amidase |
| 219 | putative protein | 249 | 4-alpha-glucanotransferase |
| 220 | HSP associated protein like | 250 | hypothetical protein |
| 221 | 60S ribosomal protein L39 | 251 | similar to auxin-induced protein |
| 222 | unknown protein | 252 | putative protein |
| | | 253 | putative protein |
| | | 254 | putative protein |
| | | 255 | hyuC-like protein |

TABLE 1 (cont)

| | | | |
|-----|---|-----|---|
| 256 | putative tetracycline transporter protein | 287 | unknown protein |
| 257 | similar to early nodulins | 288 | putative esterase D |
| 258 | putative protein | 289 | predicted protein of unknown function |
| 259 | putative peptidyl-prolyl cis-trans isomerase | 290 | unknown protein |
| 260 | unknown protein | 291 | putative indole-3-glycerol phosphate synthase |
| 261 | unknown protein | 292 | isopentenyl pyrophosphate:dimethylallyl pyrophosphate isomerase |
| 262 | putative endochitinase | 293 | kinase associated protein phosphatase |
| 263 | putative ABC transporter | 294 | putative K ⁺ channel, beta subunit |
| 264 | No function assigned by TIGR | 295 | KNAT1 homeobox-like protein |
| 265 | CONSTANS-like B-box zinc finger protein | 296 | PSI type II chlorophyll a/b-binding protein, putative |
| 266 | unknown protein | 297 | transcription factor |
| 267 | unknown protein | 298 | putative WD-40 repeat protein, MSI2 |
| 268 | putative mitochondrial processing peptidase alpha subunit | 299 | WD-40 repeat protein (MSI3) |
| 269 | putative pre-mRNA splicing factor | 300 | putative WD-40 repeat protein, MSI4 |
| 270 | putative phosphatidylserine decarboxylase | 301 | unknown protein |
| 271 | unknown protein | 302 | hypothetical protein |
| 272 | unknown protein | 303 | putative protein |
| 273 | unknown protein | 304 | No function assigned by TIGR |
| 274 | putative casein kinase I | 305 | polyphosphoinositide binding protein, putative |
| 275 | unknown protein | 306 | hypothetical protein |
| 276 | 60S ribosomal protein L23A | 307 | unknown protein |
| 277 | putative mitochondrial dicarboxylate carrier protein | 308 | chloroplast ribosomal L1 - like protein |
| 278 | enoyl-ACP reductase (enr-A) | 309 | cold-regulated protein cor15b precursor |
| 279 | putative isoamylase | 310 | cyanohydrin lyase like protein |
| 280 | formamidase - like protein | 311 | putative replication protein A1 |
| 281 | reticuline oxidase - like protein | 312 | putative protein |
| 282 | unknown protein | 313 | possible apospory-associated like protein |
| 283 | putative transketolase precursor | 314 | DNA binding protein GT-1, putative |
| 284 | putative protein | 315 | AT-hook DNA-binding protein (AHP1) |
| 285 | unknown protein | 316 | putative phospholipase |
| 286 | unknown protein | 317 | chloroplast FtsH protease, putative |

TABLE 1 (cont)

| | | | |
|-----|--|-----|---|
| 318 | enoyl-CoA hydratase like protein | 348 | putative farnesylated protein |
| 319 | berberine bridge enzyme - like protein | 349 | unknown protein |
| 320 | putative sugar transporter | 350 | water stress-induced protein, putative |
| 321 | unknown protein | 351 | unknown protein |
| 322 | No function assigned by TIGR | 352 | unknown protein |
| 323 | hypothetical protein | 353 | PEROXISOMAL MEMBRANE PROTEIN PMP22 |
| 324 | putative acidic ribosomal protein | 354 | putative peroxisomal membrane carrier protein |
| 325 | putative protein | 355 | putative protein |
| 326 | unknown protein | 356 | unknown protein |
| 327 | hypothetical protein | 357 | putative protein |
| 328 | putative protein | 358 | putative protein |
| 329 | | 359 | argininosuccinate synthase -like protein |
| | dihydroxypolyprenylbenzoate methyltransferase | 360 | 1-phosphatidylinositol-4,5-bisphosphate phosphodiesterase |
| 330 | unknown protein | 361 | putative JUN kinase activator protein |
| 331 | myb-related protein | 362 | putative 60S ribosomal protein L35 |
| 332 | No function assigned by TIGR | 363 | nucleoid DNA-binding protein cnd41 - like protein |
| 333 | putative protein | 364 | SigA binding protein |
| 334 | putative disease resistance response protein | 365 | hypothetical protein |
| 335 | hypothetical protein | 366 | putative protein kinase |
| 336 | No function assigned by TIGR | 367 | unknown protein |
| 337 | starch branching enzyme II | 368 | regulatory protein NPR1-like; transcription factor inhibitor I kappa B-like |
| 338 | No function assigned by TIGR | 369 | putative protein |
| 339 | putative enolase (2-phospho-D-glycerate hydroxylase) | 370 | hypothetical protein |
| 340 | putative protein kinase | 371 | phosphoribosylanthranilate isomerase |
| 341 | HD-Zip protein, putative | 372 | phosphoribosylanthranilate isomerase |
| 342 | putative protein kinase | 373 | sterol glucosyltransferase, putative |
| 343 | phenylalanyl-trna synthetase - like protein | 374 | putative gigantea protein |
| 344 | putative aconitase | 375 | putative MYB family transcription factor |
| 345 | NAM(no apical meristem) protein, putative | 376 | hypothetical protein |
| 346 | unknown protein | 377 | hypothetical protein |
| 347 | putative phosphomannomutase | 378 | predicted protein |
| | | 379 | cytochrome P450, putative |

TABLE 1 (cont)

| | | | |
|-----|--|-----|---|
| 380 | putative Na ⁺ dependent ileal bile acid transporter | 416 | chloroplast precursor (sp Q02166) |
| 381 | unknown protein | 417 | phytochrome C (sp P14714) |
| 382 | RING-H2 finger protein RHF1a | 418 | putative phytochrome-associated protein 3 |
| 383 | putative protein | 419 | receptor serine/threonine kinase PR5K |
| 384 | unknown protein | 420 | Ran-binding protein (atranbp1a) |
| 385 | putative protein | 421 | small Ras-like GTP-binding protein (gb AAB58478.1) |
| 386 | putative auxin-regulated protein | 422 | sterol-C5-desaturase |
| 387 | hypothetical protein | 423 | tryptophan synthase beta chain 1 precursor (sp P14671) |
| 388 | unknown protein | 424 | thioredoxin f2 (gb AAD35004.1) |
| 389 | unknown protein | 425 | No function assigned by TIGR |
| 390 | putative protein | 426 | putative WRKY DNA-binding protein |
| 391 | putative protein | 427 | putative protein |
| 392 | unknown protein | 428 | unknown protein |
| 393 | histone H1 | 429 | 14-3-3 protein homolog RCI1 (pir S47969) |
| 394 | Argonaute (AGO1)-like protein | 430 | unknown protein |
| 395 | unknown protein | 431 | putative CCCH-type zinc finger protein |
| 396 | putative protein with C-terminal RING finger | 432 | PINHEAD (gb AAD40098.1); translation initiation factor |
| 397 | unknown protein | 433 | plasma membrane proton ATPase (PMA) |
| 398 | unknown protein | 434 | CHLOROPHYLL A-B BINDING PROTEIN 4 PRECURSOR homolog |
| 399 | unknown protein | 435 | membrane related protein CP5, putative |
| 400 | unknown protein | 436 | ABC transporter (AtMRP2) |
| 401 | unknown protein | 437 | putative embryo-abundant protein |
| 402 | putative copper amine oxidase | 438 | putative anthocyanidin-3-glucoside rhamnosyltransferase |
| 403 | unknown protein | 439 | putative lipid transfer protein |
| 404 | unknown protein | 440 | unknown protein |
| 405 | unknown protein | 441 | unknown protein |
| 406 | putative protein | 442 | galactinol synthase, putative |
| 407 | putative protein | 443 | putative protein |
| 408 | unknown protein | 444 | putative protein |
| 409 | unknown protein | 445 | SCARECROW-like protein |
| 410 | putative protein | 446 | unknown protein |
| 411 | putative protein | | |
| 412 | unknown protein | | |
| 413 | serine/threonine kinase - like protein | | |
| 414 | alcohol dehydrogenase, putative | | |
| 415 | anthranilate phosphoribosyltransferase, | | |

TABLE 1 (cont)

| | | | |
|-----|---|-----|---|
| 447 | unknown protein | 476 | phosphoenolpyruvate carboxylase (PPC) |
| 448 | unknown protein | 477 | chlorophyll a/b-binding protein - like |
| 449 | unknown protein | 478 | AtAGP4 |
| 450 | asparagine--tRNA ligase | 479 | putative cryptochrome 2 apoprotein |
| 451 | putative protein | 480 | type 2 peroxiredoxin, putative |
| 452 | glutamate-1-semialdehyde 2,1-aminomutase 1 precursor (GSA 1) (glutamate-1-semialdehyde aminotransferase 1) (GSA-AT 1) (sp P42799) | 481 | Atpm24.1 glutathione S transferase |
| 453 | hypothetical protein | 482 | delta tonoplast integral protein (delta-TIP) |
| 454 | putative serine protease-like protein | 483 | 20S proteasome subunit (PAA2) |
| 455 | No function assigned by TIGR | 484 | dormancy-associated protein, putative |
| 456 | unknown protein | 485 | putative cytidine deaminase |
| 457 | unknown protein | 486 | No function assigned by TIGR |
| 458 | gamma-adaptin, putative | 487 | putative phospholipase D-gamma |
| 459 | UDP rhamnose--anthocyanidin-3-glucoside rhamnosyltransferase - like protein | 488 | cell elongation protein, Dwarf1 |
| 460 | carbonate dehydratase - like protein | 489 | germin-like protein |
| 461 | putative microtubule-associated protein | 490 | hevein-like protein precursor (PR-4) |
| 462 | putative ribophorin I | 491 | rac-like GTP binding protein (ARAC5) |
| 463 | putative zinc finger protein | 492 | phosphoprotein phosphatase, type 1 catalytic subunit |
| 464 | chloroplast FtsH protease, putative | 493 | ubiquitin-protein ligase UBC9 |
| 465 | putative protein | 494 | xyloglucan endotransglycosylase-related protein XTR-7 |
| 466 | unknown protein | 495 | cysteine synthase |
| 467 | putative LEA protein | 496 | putative villin 2 |
| 468 | putative protein | 497 | glutathione S-transferase |
| 469 | putative protein | 498 | 5-adenylylsulfate reductase |
| 470 | unknown protein | 499 | arginine decarboxylase |
| 471 | putative purple acid phosphatase | 500 | ATHP2, putative |
| 472 | unknown protein | 501 | ornithine carbamoyltransferase precursor |
| 473 | putative protein | 502 | putative protein |
| 474 | unknown protein | 503 | putative protein |
| 475 | chlorophyll binding protein, putative | 504 | unknown protein |
| | | 505 | putative protein |
| | | 506 | putative protein |
| | | 507 | unknown protein |
| | | 508 | unknown protein |
| | | 509 | unknown protein |
| | | 510 | unknown protein |
| | | 511 | hypothetical protein |

TABLE 1 (cont)

| | | | |
|-----|---|-----|---|
| 512 | putative protein | 552 | putative CCCH-type zinc finger protein |
| 513 | putative DnaJ protein | 553 | MAP kinase kinase 2 |
| 514 | plastocyanin | 554 | ethylene-insensitive3-like1 (EIL1) |
| 515 | unknown protein | 555 | histidine transport protein (PTR2-B) |
| 516 | unknown protein | 556 | putative auxin-induced protein AUX2-11 |
| 517 | unknown protein | 557 | hydroxyacylglutathione hydrolase cytoplasmic (glyoxalase II) (GLX II) |
| 518 | unknown protein | 558 | delta-8 sphingolipid desaturase |
| 519 | unknown protein | 559 | cellulose synthase catalytic subunit (Ath-A) |
| 520 | unknown protein | 560 | nitrate transporter (NTL1) |
| 521 | putative ATP-dependent RNA helicase | 561 | DNA-binding homeotic protein Athb-2 |
| 522 | non-race specific disease resistance protein (NDR1) | 562 | hypothetical protein |
| 523 | hypothetical protein | 563 | aspartate aminotransferase |
| 524 | putative protein | 564 | 4-coumarate:CoA ligase 1 |
| 525 | putative protein | 565 | pyruvate dehydrogenase E1 beta subunit, putative |
| 526 | putative protein | 566 | nucleotide diphosphate kinase Ia (emb CAB58230.1) |
| 527 | copper transport protein | 567 | chloroplast Cpn21 protein |
| 528 | putative protein | 568 | ATP dependent copper transporter |
| 529 | unknown protein | 569 | very-long-chain fatty acid condensing enzyme (CUT1) |
| 530 | unknown protein | 570 | putative purine-rich single-stranded DNA-binding protein |
| 531 | unknown protein | 571 | serine/threonine protein phosphatase (type 2A) |
| 532 | putative protein kinase | 572 | isopentenyl diphosphate:dimethylallyl diphosphate isomerase (IPP2) |
| 533 | unknown protein | 573 | putative c2h2 zinc finger transcription factor |
| 534 | putative protein | 574 | putative 20S proteasome beta subunit PBC2 |
| 535 | putative protein | 575 | nucleoside diphosphate kinase 3 (ndpk3) |
| 536 | hypothetical protein | 576 | ras-related small GTP-binding protein |
| 537 | putative protein | 577 | putative 4-coumarate:CoA ligase 2 |
| 538 | putative AP2 domain transcription factor | | |
| 539 | putative nitrilase | | |
| 540 | putative protein | | |
| 541 | putative tetrahydrofolate synthase | | |
| 542 | heat-shock protein | | |
| 543 | unknown protein | | |
| 544 | unknown protein | | |
| 545 | histone H4 | | |
| 546 | hypothetical protein | | |
| 547 | unknown protein | | |
| 548 | putative protein | | |
| 549 | predicted protein | | |
| 550 | putative dihydrolipoamide succinyltransferase | | |
| 551 | actin 3 | | |

TABLE 1 (cont)

| | | | |
|-----|---|-----|--|
| 578 | transcription factor HBP-1b homolog (sp P43273) | 609 | photosystem II oxygen-evolving complex protein 3 - like |
| 579 | biotin synthase (Bio B) | 610 | sedoheptulose-bisphosphatase precursor |
| 580 | homeobox protein HAT22 | 611 | glutathione S-transferase (GST6) |
| 581 | putative preprotein translocase SECY protein | 612 | geranylgeranyl reductase |
| 582 | carbamoylphosphate synthetase, putative | 613 | hypothetical protein |
| 583 | putative protein kinase, ADK1 | 614 | hypothetical protein |
| 584 | putative nuclear DNA-binding protein G2p | 615 | phosphoribulokinase precursor |
| 585 | hypothetical protein | 616 | high mobility group protein (HMG1), putative |
| 586 | hypothetical protein | 617 | protease inhibitor II |
| 587 | unknown protein | 618 | protease inhibitor II |
| 588 | unknown protein | 619 | cytochrome P450 90A1 (sp Q42569) |
| 589 | molybdopterin synthase (CNX2) | 620 | unknown protein |
| 590 | putative ribosomal protein L6 | 621 | heat shock protein 90 |
| 591 | unknown protein | 622 | tubulin beta-9 chain |
| 592 | En/Spm-like transposon protein | 623 | putative ubiquitin carboxyl terminal hydrolase |
| 593 | putative protein | 624 | protein kinase |
| 594 | putative protein | 625 | DRE/CRT-binding protein DREB1C |
| 595 | unknown protein | 626 | histidyl-tRNA synthetase |
| 596 | hypothetical protein | 627 | splicing factor, putative |
| 597 | unknown protein | 628 | glutamyl-tRNA synthetase |
| 598 | unknown protein | 629 | putative RING zinc finger protein |
| 599 | putative lysosomal acid lipase | 630 | phytochelatin synthase (gb AAD41794.1) |
| 600 | unknown protein | 631 | putative C2H2-type zinc finger protein |
| 601 | unknown protein | 632 | putative ligand-gated ion channel protein |
| 602 | NifS-like aminotransferase | 633 | putative ribosomal-protein S6 kinase (ATPK6) |
| 603 | actin 3 | 634 | MOLYBDOPTERIN BIOSYNTHESIS CNX1 PROTEIN |
| 604 | hypothetical protein | 635 | temperature-sensitive omega-3 fatty acid desaturase, chloroplast precursor (sp P48622) |
| 605 | putative protein | 636 | adenylosuccinate synthetase |
| 606 | heat-shock protein (At-hsc70-3) | 637 | putative 14-3-3 protein |
| 607 | putative protein disulfide isomerase precursor | 638 | putative cytochrome P450 |
| 608 | adenosine nucleotide translocator | | |

TABLE 1 (cont)

| | | | |
|-----|---|-----|---|
| 639 | putative two-component response regulator 3 protein | 667 | putative receptor-like protein kinase |
| 640 | putative RING-H2 zinc finger protein ATL6 | 668 | putative disease resistance protein |
| 641 | No function assigned by TIGR | 669 | receptor-like protein kinase - like |
| 642 | small zinc finger-like protein | 670 | ubiquitin activating enzyme 2 (gb AAB37569.1) |
| 643 | hypothetical protein | 671 | No function assigned by TIGR |
| 644 | MAP kinase (ATMPK6) | 672 | putative receptor-like protein kinase |
| 645 | vacuolar ATP synthase, putative | 673 | K ⁺ transporter, AKT1 |
| 646 | kinesin-like protein | 674 | shaggy-like kinase beta |
| 647 | serine/threonine-specific protein kinase NAK | 675 | heat shock protein 70 |
| 648 | No function assigned by TIGR | 676 | plasma membrane intrinsic protein 1a |
| 649 | ACTIN 2/7 (sp P53492) | 677 | HSP90-like protein |
| 650 | phosphoglycerate kinase, putative | 678 | histone H1, putative |
| 651 | homeotic protein BEL1 homolog | 679 | unknown protein |
| 652 | proline iminopeptidase | 680 | dnaK-type molecular chaperone hsc70.1 - like |
| 653 | pasticcino 1 | 681 | gamma-glutamylcysteine synthetase |
| 654 | serine/threonine protein kinase | 682 | peroxidase (ATP22a) |
| 655 | cytochrome P450 monooxygenase (CYP71B4) | 683 | putative serine carboxypeptidase precursor |
| 656 | No function assigned by TIGR | 684 | putative dioxygenase |
| 657 | putative GDSL-motif lipase/hydrolase | 685 | glucose transporter |
| 658 | putative protein | 686 | NOI protein, nitrate-induced |
| 659 | unknown protein | 687 | putative protein |
| 660 | hypothetical protein | 688 | putative protein |
| 661 | putative glycosylation enzyme | 689 | unknown protein |
| 662 | No function assigned by TIGR | 690 | putative photosystem I reaction center subunit II precursor |
| 663 | No function assigned by TIGR | 691 | putative protein |
| 664 | unknown protein | 692 | unknown protein |
| 665 | putative ABC transporter | 693 | cobalamin biosynthesis protein |
| 666 | nifU-like protein | 694 | adenine nucleotide translocase |
| | | 695 | glutathione transferase, putative |
| | | 696 | putative 60S ribosomal protein L21 |
| | | 697 | cytochrome P450 like protein |
| | | 698 | cytochrome b245 beta chain homolog RbohAp108, putative |
| | | 699 | RNA helicase, DRH1 |
| | | 700 | putative aldolase |
| | | 701 | farnesyltransferase subunit A (FTA) |

TABLE 1 (cont)

| | | | |
|-----|--|-----|---|
| 702 | No function assigned by TIGR | 725 | putative protein |
| 703 | putative putative sister-chromatide cohesion protein | 726 | NBD-like protein (gb AAD20643.1) |
| 704 | calcium-dependent protein kinase | 727 | AtHVA22c |
| 705 | serine/threonine protein phosphatase type 2A, putative | 728 | unknown protein |
| 706 | 40S ribosomal protein S28 (sp P34789) | 729 | phytoene synthase (gb AAB65697.1) |
| 707 | RNA polymerase subunit | 730 | protein kinase (AME2/AFC1) |
| 708 | DNA-damage-repair/tolerant protein DRT102 | 731 | hypothetical protein |
| 709 | putative C2H2-type zinc finger protein | 732 | cyclin-dependent protein kinase-like protein |
| 710 | putative adenosine phosphosulfate kinase | 733 | photosystem II stability/assembly factor HCF136 (sp O82660) |
| 711 | lipase | 734 | hypothetical protein |
| 712 | putative violaxanthin de-epoxidase precursor (U44133) | 735 | DNA binding-like protein |
| 713 | aromatic rich glycoprotein, putative | 736 | putative protein |
| 714 | putative fumarase | 737 | chorismate mutase |
| 715 | flavonol synthase (FLS) (sp Q96330) | 738 | putative LRR receptor protein kinase |
| 716 | response regulator 5, putative | 739 | putative chalcone synthase |
| 717 | sulfate transporter | 740 | putative protein kinase |
| 718 | putative floral homeotic protein, AGL9 | 741 | replicase, putative |
| 719 | putative ethylene-inducible protein | 742 | putative cysteine proteinase |
| 720 | C-8,7 sterol isomerase | 743 | 60S ribosomal protein L36 |
| 721 | TCH4 protein (gb AAA92363.1) | 744 | unknown protein |
| 722 | hypothetical protein | 745 | CLC-b chloride channel protein |
| 723 | putative urease accessory protein | 746 | putative ribosomal protein S14 |
| 724 | molybdopterin synthase sulphurylase (gb AAD18050.1) | 747 | histone H2B like protein (emb CAA69025.1) |
| | | 748 | 60S ribosomal protein L2 |
| | | 749 | 60S ribosomal protein L15 homolog |
| | | 750 | ribosomal protein S27 |
| | | 751 | ribosomal protein |
| | | 752 | 60S ribosomal protein L12 |
| | | 753 | 60s ribosomal protein L34 |
| | | 754 | putative ribosomal protein S10 |
| | | 755 | drought-induced protein like |
| | | 756 | blue copper-binding protein, 15K (lamin) |
| | | 757 | calmodulin-like protein |
| | | 758 | putative protein |
| | | 759 | No function assigned by TIGR |
| | | 760 | alpha-mannosidase, putative |
| | | 761 | uncoupling protein (ucp/PUMP) |

TABLE 1 (cont)

| | | | |
|------------|--------------------------------|--------------------------------------|------------------------------------|
| 762 | homeodomain - like protein | 786 | calcium-dependent protein kinase |
| 763 | ribosomal protein S18, | (pir S71196) | |
| putative | | 787 | phosphoinositide specific |
| 764 | similar to SOR1 from the | phospholipase C | |
| | fungus <i>Cercospora</i> | 788 | similarity to S-domain receptor- |
| | <i>nicotianae</i> | like protein kinase, <i>Zea mays</i> | |
| 765 | 60S ribosomal protein L13, | 789 | mitosis-specific cyclin 1b |
| | BBC1 protein | 790 | 4-coumarate:CoA ligase 3 |
| 766 | 50S ribosomal protein L24, | 791 | transcription factor IIB (TFIIB) |
| | chloroplast precursor | 792 | unknown protein |
| 767 | putative ribosomal protein | 793 | hypothetical protein |
| 768 | unknown protein | 794 | hypothetical protein |
| 769 | aspartate aminotransferase | 795 | sugar transporter like protein |
| | (AAT1) | 796 | putative trypsin inhibitor |
| 770 | potassium channel protein | 797 | unknown protein |
| | AtKC | 798 | putative multispanning membrane |
| 771 | unknown protein | protein | |
| 772 | peroxisomal targeting | 799 | receptor-like kinase, putative |
| | signal type 2 receptor | 800 | putative inosine-5-monophosphate |
| 773 | putative protein | dehydrogenase | |
| 774 | Ras-related GTP-binding | 801 | inosine-5'-monophosphate |
| | protein (ARA-4) | dehydrogenase, putative | |
| 775 | S-receptor kinase homolog | 802 | amino acid permease 6 |
| | 2 precursor | (emb CAA65051.1) | |
| 776 | pathogenesis-related group | 803 | NADPH-ferrihemoprotein |
| | 5 protein, putative | reductase (ATR2) | |
| 777 | Nitrilase 4 (sp P46011) | 804 | putative WRKY-type DNA binding |
| 778 | biotin carboxyl carrier | protein | |
| | protein of acetyl-CoA | 805 | putative ankyrin |
| | carboxylase precursor | 806 | putative hexose transporter |
| | (BCCP) (sp Q42533) | 807 | aquaporin/MIP - like protein |
| 779 | photosystem I reaction | 808 | Ser/Thr protein kinase isolog |
| | centre subunit psaN | 809 | pectate lyase like protein |
| | precursor (PSI-N) | 810 | putative 60S ribosomal protein L17 |
| | (sp P49107) | 811 | putative protein |
| 780 | 3(2),5-bisphosphate | 812 | unknown protein |
| | nucleotidase | 813 | phenylalanine ammonia-lyase |
| 781 | high affinity Ca ²⁺ | 814 | putative cytochrome P450 |
| antiporter | | monooxygenase | |
| 782 | putative cytoskeletal | 815 | ARR1 protein, putative |
| protein | | 816 | putative bHLH transcription factor |
| 783 | putative peroxidase | 817 | aminomethyltransferase-like |
| 784 | respiratory burst oxidase | precursor protein | |
| protein | | 818 | purple acid phosphatase precursor |
| 785 | beta-glucosidase | | |

TABLE 1 (cont)

| | | | |
|-----|--|-----|---|
| 819 | AP2 domain containing protein, putative | 844 | mercaptopyruvate sulfurtransferase, putative |
| 820 | ubiquitin-conjugating enzyme E2-21 kD 1 (ubiquitin-protein ligase 4) (ubiquitin carrier protein 4) (sp P42748) | 845 | putative thiosulfate sulfurtransferase |
| 821 | translation initiation factor | 846 | dihydrolipoamide S-acetyltransferase |
| 822 | putative VAMP-associated protein | 847 | auxin transport protein REH1, putative |
| 823 | spermidine synthase, putative | 848 | putative auxin transport protein |
| 824 | putative protein | 849 | apyrase (Atapy1) |
| 825 | unknown protein | 850 | root cap 1 (RCP1) |
| 826 | AtKAP alpha | 851 | hypothetical protein |
| 827 | glyceraldehyde-3-phosphate dehydrogenase, putative | 852 | putative protein |
| 828 | putative poly(A) binding protein | 853 | predicted protein of unknown function |
| 829 | alpha-tubulin, putative | 854 | hypothetical protein |
| 830 | serine/threonine-specific protein kinase ATPK64 (pir S20918) | 855 | hypothetical protein |
| 831 | putative aspartate-tRNA ligase | 856 | hypothetical protein |
| 832 | ras-related small GTP-binding protein RAB1c | 857 | putative aldehyde dehydrogenase |
| 833 | cycloartenol synthase | 858 | putative peroxidase |
| 834 | No function assigned by TIGR | 859 | UDP-glucose 4-epimerase - like protein |
| 835 | cytochrome P450 | 860 | indole-3-acetate beta-glucosyltransferase like protein |
| 836 | GTPase AtRAB8 | 861 | putative beta-1,3-glucanase |
| 837 | 3-phosphoserine phosphatase | 862 | disease resistance protein-like |
| 838 | transcription factor CRC | 863 | putative respiratory burst oxidase protein B |
| 839 | nuclear cap-binding protein; CBP20 (gb AAD29697.1) | 864 | ubiquitin-conjugating enzyme UBC3 |
| 840 | chloroplast membrane protein (ALBINO3) | 865 | cytoplasmic aconitate hydratase |
| 841 | biotin holocarboxylase synthetase | 866 | NADPH oxidoreductase, putative |
| 842 | expansin AtEx6 | 867 | PROTEIN TRANSPORT PROTEIN SEC61 GAMMA SUBUNIT -like |
| 843 | unknown protein | 868 | putative protein |
| | | 869 | unknown protein |
| | | 870 | 60S acidic ribosomal protein P2 |
| | | 871 | No function assigned by TIGR |
| | | 872 | 1,4-alpha-glucan branching enzyme protein soform SBE2.2 precursor |
| | | 873 | calcium binding protein (CaBP-22) |
| | | 874 | putative phosphoglucomutase |

TABLE 1 (cont)

| | | | |
|-----|---|-----|--|
| 875 | shaggy-like protein kinase etha (EC 2.7.1.-) | 901 | putative RAS superfamily GTP-binding protein |
| 876 | pyruvate decarboxylase (gb AAB16855.1) | 902 | disease resistance protein-like |
| 877 | hypothetical protein | 903 | protein kinase like protein |
| 878 | putative protein kinase | 904 | glucuronosyl transferase-like protein |
| 879 | putative protein kinase | 905 | putative homeodomain transcription factor |
| 880 | putative leucine aminopeptidase | 906 | putative flavonol reductase |
| 881 | probable cytochrome P450 | 907 | putative protein |
| 882 | protein kinase 6-like protein | 908 | salt-tolerance protein |
| 883 | arginine methyltransferase (pam1) | 909 | 40S ribosomal protein S30 |
| 884 | MYB96 transcription factor-like protein | 910 | putative bZIP transcription factor |
| 885 | putative protein | 911 | putative protein |
| 886 | metal ion transporter | 912 | putative cinnamoyl CoA reductase |
| 887 | No function assigned by TIGR | 913 | unknown protein |
| 888 | flax rust resistance protein, putative | 914 | putative RNA-binding protein |
| 889 | fructose-2,6-bisphosphatase, putative | 915 | phosphatidylinositol synthase (PIS1) |
| 890 | exonuclease RRP41 | 916 | unknown protein |
| 891 | squamosa promoter binding protein-like 2 (emb CAB56576.1) | 917 | hydroxyproline-rich glycoprotein homolog |
| 892 | putative squamosa-promoter binding protein | 918 | 50S ribosomal protein L15, chloroplast precursor |
| 893 | O-acetylserine(thiol) lyase, putative | 919 | unknown protein |
| 894 | snoRNA | 920 | putative YME1 ATP-dependant protease |
| 895 | snoRNA | 921 | unknown protein |
| 896 | ferredoxin-NADP+ reductase | 922 | putative ribosomal protein L28 |
| 897 | H+-transporting ATP synthase chain 9 - like protein | 923 | unknown protein |
| 898 | photosystem I subunit III precursor, putative | 924 | putative protein |
| 899 | photosystem I subunit VI precursor | 925 | protein ch-42 precursor, chloroplast |
| 900 | auxin-binding protein 1 precursor | 926 | protein serine/threonine kinase, putative |
| | | 927 | beta-VPE |
| | | 928 | putative vacuolar sorting receptor |
| | | 929 | putative translation initiation factor IF-2 |
| | | 930 | predicted protein of unknown function |
| | | 931 | putative protein |
| | | 932 | hypothetical protein |
| | | 933 | hypothetical protein |
| | | 934 | phosphate transporter, putative |

TABLE 1 (cont)

| | | | |
|-----|--|-----|--|
| 935 | No function assigned by TIGR | 961 | unknown protein |
| 936 | beta subunit of protein farnesyl transferase ERA1 | 962 | unknown protein |
| 937 | putative glutamate decarboxylase | 963 | unknown protein |
| 938 | putative indole-3-acetate beta-glucosyltransferase | 964 | myrosinase-associated protein, putative |
| 939 | putative receptor-like protein kinase | 965 | hypothetical protein |
| 940 | UDP-galactose 4-epimerase-like protein | 966 | hypothetical protein |
| 941 | putative proliferating cell nuclear antigen, PCNA | 967 | No function assigned by TIGR |
| 942 | ubiquitin conjugating enzyme E2 (UBC13) | 968 | unknown protein |
| 943 | cyclophilin (CYP2) | 969 | hypothetical protein |
| 944 | cystatin (emb CAA03929.1) | 970 | LAX1 / AUX1 -like permease |
| 945 | putative alcohol dehydrogenase | 971 | putative UDP-N-acetylglucosamine--dolichyl-phosphate N-acetylglucosaminephosphotransferase |
| 946 | acidic ribosomal protein p1 | 972 | chorismate mutase CM2 |
| 947 | glutathione transferase AtGST 10 (emb CAA10457.1) | 973 | inner mitochondrial membrane protein |
| 948 | putative tropinone reductase | 974 | DEF (CLA1) protein |
| 949 | ZIP4, a putative zinc transporter | 975 | decoy |
| 950 | unknown protein | 976 | citrate synthase |
| 951 | putative protein | 977 | myosin |
| 952 | putative protein | 978 | 40S ribosomal protein S19 |
| 953 | putative C2H2-type zinc finger protein | 979 | ripening-related protein - like |
| 954 | putative RING zinc finger protein | 980 | putative signal peptidase I |
| 955 | putative microtubule-associated protein | 981 | methionyl-tRNA synthetase (AtcpMetRS) |
| 956 | unknown protein | 982 | ribosomal protein precursor - like |
| 957 | putative protein | 983 | 50S ribosomal protein L21 chloroplast precursor (CL21) |
| 958 | putative protein phosphatase-2c | 984 | putative MYB family transcription factor |
| 959 | V-ATPase subunit G (vag2 gene) | 985 | cyclophilin - like protein |
| 960 | hypothetical protein | 986 | hypothetical protein |
| | | 987 | naringenin 3-dioxygenase like protein |
| | | 988 | WD-repeat protein -like protein |
| | | 989 | putative serine carboxypeptidase II |
| | | 990 | prenyltransferase, putative |
| | | 991 | putative ligand-gated ion channel protein |
| | | 992 | clathrin adaptor medium chain protein MU1B, putative |
| | | 993 | No function assigned by TIGR |

TABLE 1 (cont)

| | | | |
|------|---|------|---|
| 994 | putative Tal1-like non-LTR retroelement protein | 1025 | putative tropinone reductase |
| 995 | putative 3-isopropylmalate dehydrogenase | 1026 | signal response protein (GAI) |
| 996 | 3-isopropylmalate dehydratase, small subunit | 1027 | putative steroid sulfotransferase |
| 997 | unknown protein | 1028 | hypothetical protein |
| 998 | unknown protein | 1029 | nucleic acid binding protein - like |
| 999 | unknown protein | 1030 | putative protein |
| 1000 | hypothetical protein | 1031 | blue copper binding protein |
| 1001 | putative protein | 1032 | farnesylated protein (ATFP6) |
| 1002 | No function assigned by TIGR | 1033 | unknown protein |
| 1003 | putative beta-glucosidase | 1034 | putative PCF2-like DNA binding protein |
| 1004 | putative pectate lyase A11 | 1035 | teosinte branched1 - like protein |
| 1005 | putative beta-glucosidase | 1036 | putative protein |
| 1006 | HD-Zip protein | 1037 | unknown protein |
| 1007 | putative ubiquitin conjugating enzyme | 1038 | unknown protein |
| 1008 | homeobox-leucine zipper protein-like | 1039 | 2-oxoglutarate dehydrogenase, E1 component |
| 1009 | cytochrome P450 like protein | 1040 | unknown protein |
| 1010 | putative cysteine proteinase inhibitor B (cystatin B) | 1041 | unknown protein |
| 1011 | ethylene response sensor (ERS) | 1042 | CCAAT-binding transcription factor subunit A(CBF-A) |
| 1012 | putative SWH1 protein | 1043 | hypothetical protein |
| 1013 | putative glutathione S-transferase | 1044 | putative growth regulator protein |
| 1014 | putative protein | 1045 | putative presenilin |
| 1015 | unknown protein | 1046 | putative expansin |
| 1016 | putative protein phosphatase 2C | 1047 | ribosomal - like protein |
| 1017 | dnaJ protein homolog atj3 | 1048 | unknown protein |
| 1018 | ferredoxin | 1049 | unknown protein |
| 1019 | hypothetical protein | 1050 | putative protein |
| 1020 | putative sugar transport protein, ERD6 | 1051 | putative protein |
| 1021 | putative DnaJ protein | 1052 | unknown protein |
| 1022 | putative AP2 domain transcription factor | 1053 | unknown protein |
| 1023 | putative protein | 1054 | unknown protein |
| 1024 | putative cyclin-dependent kinase regulatory subunit | 1055 | unknown protein |
| | | 1056 | unknown protein |
| | | 1057 | putative protein |
| | | 1058 | putative protein |
| | | 1059 | argininosuccinate lyase (AtArgH) |
| | | 1060 | disease resistance protein homolog |
| | | 1061 | aldehyde dehydrogenase like protein |
| | | 1062 | GBF2, G-box binding factor |
| | | 1063 | CDPK-related kinase |
| | | 1064 | endo-1,4-beta-glucanase |
| | | 1065 | putative serine protease |

TABLE 1 (cont)

| | | | |
|------|---|------|--|
| 1066 | serine/threonine-specific kinase lecRK1 precursor, lectin receptor-like | 1091 | putative ATP-dependent RNA helicase |
| 1067 | putative MAP kinase | 1092 | putative protein |
| 1068 | RNase L inhibitor-like protein | 1093 | putative HMG protein |
| 1069 | No function assigned by TIGR | 1094 | squalene monooxygenase 2 (squalene epoxidase 2) (SE 2) (sp O65403) |
| 1070 | AP2 domain transcription factor | 1095 | eukaryotic peptide chain release factor subunit 1, putative |
| 1071 | polygalacturonase isoenzyme 1 beta subunit, putative | 1096 | auxin-induced protein - like |
| 1072 | putative lipid transfer protein | 1097 | putative lipoamide dehydrogenase |
| 1073 | putative protein kinase | 1098 | putative protein |
| 1074 | putative protein | 1099 | unknown protein |
| 1075 | ATP-dependent RNA helicase like protein | 1100 | putative oligopeptide transporter |
| 1076 | putative cyclic nucleotide-regulated ion channel protein | 1101 | putative translation elongation factor ts |
| 1077 | COP1 like protein | 1102 | putative CCAAT-binding transcription factor subunit |
| 1078 | putative peroxidase | 1103 | putative ABC transporter |
| 1079 | putative NAK-like ser/thr protein kinase | 1104 | putative superoxide-generating NADPH oxidase flavocytochrome |
| 1080 | putative cytochrome C | 1105 | aspartate kinase-homoserine dehydrogenase - like protein |
| 1081 | cytochrome c | 1106 | putative bHLH transcription factor |
| 1082 | putative serine carboxypeptidase II | 1107 | putative geranylgeranyl transferase type I beta subunit |
| 1083 | acyl-(acyl carrier protein) thioesterase | 1108 | putative ARP2/3 protein complex subunit p41 |
| 1084 | DNA-binding factor, putative | 1109 | sulphite reductase |
| 1085 | MAP3K delta-1 protein kinase | 1110 | putative auxin-regulated protein |
| 1086 | AtMlo-h1-like protein | 1111 | transcription factor scarecrow-like 14, putative |
| 1087 | No function assigned by TIGR | 1112 | unknown protein |
| 1088 | putative expansin | 1113 | monooxygenase 2 (MO2) |
| 1089 | defender against cell death protein, putative | 1114 | putative amine oxidase |
| 1090 | glycolate oxidase - like protein | 1115 | zinc finger protein, putative |
| | | 1116 | DNA-binding protein, putative |
| | | 1117 | putative protein |
| | | 1118 | putative protein |
| | | 1119 | Avr9 elicitor response like protein |
| | | 1120 | putative protein |
| | | 1121 | hypothetical protein |
| | | 1122 | putative nucleotide-sugar dehydratase |
| | | 1123 | UFD1 like protein |

TABLE 1 (cont)

| | | | |
|------|--|------|---|
| 1124 | putative trans-prenyltransferase | 1155 | cytochrome c oxidoreductase like protein |
| 1125 | outward rectifying potassium channel KCO | 1156 | putative carboxymethylenebutenolidase |
| 1126 | unknown protein | 1157 | unknown protein |
| 1127 | putative pectinacetyltransferase | 1158 | unknown protein |
| 1128 | putative protein | 1159 | unknown protein |
| 1129 | No function assigned by TIGR | 1160 | unknown protein |
| 1130 | unknown protein | 1161 | unknown protein |
| 1131 | unknown protein | 1162 | unknown protein |
| 1132 | unknown protein | 1163 | auxin-induced protein (IAA20) |
| 1133 | protein phosphatase homolog (PPH1) | 1164 | 50S ribosomal protein L4 |
| 1134 | unknown protein | 1165 | putative DNA topoisomerase III beta |
| 1135 | No function assigned by TIGR | 1166 | No function assigned by TIGR |
| 1136 | unknown protein | 1167 | isp4 like protein |
| 1137 | unknown protein | 1168 | putative protein kinase |
| 1138 | unknown protein | 1169 | hypothetical protein |
| 1139 | putative protein | 1170 | putative pyrophosphate--fructose-6-phosphate 1-phosphotransferase |
| 1140 | unknown protein | 1171 | putative protein |
| 1141 | putative ubiquinol--cytochrome-c reductase | 1172 | putative protein |
| 1142 | unknown protein | 1173 | putative protein |
| 1143 | contains similarity to high-glucose-regulated protein 8 GB:AAF08813 GI:6449083 from [Homo sapiens] | 1174 | unknown protein |
| 1144 | unknown protein | 1175 | unknown protein |
| 1145 | putative cis-Golgi SNARE protein | 1176 | putative protein |
| 1146 | unknown protein | 1177 | putative protein |
| 1147 | glutamate-1-semialdehyde aminotransferase | 1178 | unknown protein |
| 1148 | No function assigned by TIGR | 1179 | unknown protein |
| 1149 | hypothetical protein | 1180 | putative protein |
| 1150 | unknown protein | 1181 | brassinosteroid insensitive 1 gene (BRI1) |
| 1151 | unknown protein | 1182 | putative receptor protein kinase |
| 1152 | unknown protein | 1183 | vacuolar-type H ⁺ -translocating inorganic pyrophosphatase |
| 1153 | scarecrow-like 3 | 1184 | protein kinase - like protein |
| 1154 | putative proline-rich protein | 1185 | glycyl tRNA synthetase, putative |
| | | 1186 | subtilisin proteinase - like |
| | | 1187 | hypothetical protein |
| | | 1188 | cytochrome P450-like protein |
| | | 1189 | cytochrome p450 like protein |
| | | 1190 | putative protein kinase |
| | | 1191 | pectinesterase - like protein |
| | | 1192 | putative receptor-like protein kinase |

TABLE 1 (cont)

| | | | |
|------|---|------|--|
| 1193 | peroxidase ATP17a -like protein | 1219 | putative AP2 domain transcription factor |
| 1194 | No function assigned by TIGR | 1220 | brassinosteroid receptor kinase, putative |
| 1195 | cellulose synthase catalytic subunit - like protein | 1221 | TINY-like protein |
| 1196 | RAS-related protein, RAB7 | 1222 | glucose-6-phosphate isomerase |
| 1197 | putative aspartate aminotransferase | 1223 | putative protein |
| 1198 | cyclophilin | 1224 | putative NAM (no apical meristem)-like protein |
| 1199 | putative SF2/ASF splicing modulator, Srp30 | 1225 | unknown protein |
| 1200 | putative cytochrome b5 | 1226 | putative nucleotide-binding protein |
| 1201 | glutamyl-tRNA reductase, putative | 1227 | bZIP transcription factor (POSF21) |
| 1202 | putative MADS-box protein | 1228 | ubiquitin activating enzyme - like protein |
| 1203 | ammonium transport protein (AMT1) | 1229 | telomere repeat-binding protein |
| 1204 | No function assigned by TIGR | 1230 | unknown protein |
| 1205 | putative beta-ketoacyl-CoA synthase | 1231 | mevalonate kinase |
| 1206 | thaumatin-like protein | 1232 | putative protein |
| 1207 | putative methionine aminopeptidase | 1233 | hypothetical protein |
| 1208 | putative protein phosphatase 2C | 1234 | disease resistance RPP5 like protein |
| 1209 | kinase-like protein | 1235 | putative protein |
| 1210 | receptor-associated kinase isolog | 1236 | putative pectinesterase |
| 1211 | mitochondrial ribosomal protein S14 | 1237 | Ttg1 protein (emb CAB45372.1) |
| 1212 | oleosin, 18.5K | 1238 | FUSCA PROTEIN FUS6 |
| 1213 | chalcone isomerase | 1239 | NHE1 Na ⁺ /H ⁺ exchanger |
| 1214 | putative cyclin-dependent kinase regulatory subunit | 1240 | No function assigned by TIGR |
| 1215 | putative thaumatin-like protein | 1241 | Phospholipase like protein |
| 1216 | putative two-component response regulator protein | 1242 | unknown protein |
| 1217 | TATA binding protein-associated factor, putative | 1243 | unknown protein |
| 1218 | predicted protein of unknown function | 1244 | unknown protein |
| | | 1245 | AUX1-like amino acid permease |
| | | 1246 | unknown protein |
| | | 1247 | putative C2H2-type zinc finger protein |
| | | 1248 | putative protein |
| | | 1249 | putative protein |
| | | 1250 | putative glucosyltransferase |
| | | 1251 | putative lipase |
| | | 1252 | putative protein |
| | | 1253 | putative thioredoxin |
| | | 1254 | AIG2-like protein |
| | | 1255 | short-chain alcohol dehydrogenase like protein |
| | | 1256 | hypothetical protein |

TABLE 1 (cont)

| | | | |
|------|--|------|---|
| 1257 | putative protein | 1287 | No function assigned by TIGR |
| 1258 | putative protein | 1288 | serine/threonine protein kinase ATPK10 |
| 1259 | glutathione peroxidase - like protein | 1289 | putative lipase |
| 1260 | putative protein | 1290 | choline kinase GmCK2p -like protein |
| 1261 | putative disease resistance response protein | 1291 | putative sugar transport protein, ERD6 |
| 1262 | putative protein | 1292 | MYB27 protein - like |
| 1263 | senescence-associated protein (SAG29) | 1293 | DNA-binding protein, putative |
| 1264 | glycolate oxidase, putative | 1294 | similar to cold acclimation protein WCOR413 [<i>Triticum aestivum</i>] |
| 1265 | extensin - like protein | 1295 | unknown protein |
| 1266 | putative protein | 1296 | aquaporin (plasma membrane intrinsic protein 2B) |
| 1267 | unknown protein | 1297 | No function assigned by TIGR |
| 1268 | putative disease resistance protein | 1298 | P-Protein - like protein |
| 1269 | putative receptor-like protein kinase | 1299 | No function assigned by TIGR |
| 1270 | putative receptor-like protein kinase | 1300 | putative cytochrome P450 monooxygenase |
| 1271 | basic chitinase | 1301 | putative cytochrome P450 monooxygenase |
| 1272 | putative pectin methylesterase | 1302 | putative thioredoxin |
| 1273 | peroxidase ATP N | 1303 | stromal ascorbate peroxidase |
| 1274 | class 2 non-symbiotic hemoglobin | 1304 | ethylene responsive element binding factor-like protein (AtERF6) |
| 1275 | nitrate transporter | 1305 | auxin transport protein EIR1 (gb AAC39513.1) |
| 1276 | Ca ²⁺ /H ⁺ -exchanging protein-like | 1306 | putative CONSTANS-like B-box zinc finger protein |
| 1277 | putative protein | 1307 | putative protein kinase |
| 1278 | hydroxynitrile lyase like protein | 1308 | mitochondrial Lon protease homolog 1 precursor (sp O64948) |
| 1279 | putative AP2 domain transcription factor | 1309 | putative protein |
| 1280 | pectin methylesterase, putative | 1310 | heme activated protein, putative |
| 1281 | putative protein | 1311 | putative cytochrome P450 |
| 1282 | beta-glucosidase-like protein | 1312 | No function assigned by TIGR |
| 1283 | CCAAT box binding factor/ transcription factor Hap2a | 1313 | putative lipase |
| 1284 | putative fibrillin | 1314 | putative protein |
| 1285 | xyloglucan endo- transglycosylase | 1315 | putative sugar transporter protein |
| 1286 | putative 10kd chaperonin | 1316 | putative sucrose transport protein, SUC2 |
| | | 1317 | putative protein |
| | | 1318 | putative protein |

TABLE 1 (cont)

| | | | |
|------|---|------|--|
| 1319 | putative endochitinase | 1351 | unknown protein |
| 1320 | putative acetone-cyanohydrin lyase | 1352 | bZIP transcription factor - like protein |
| 1321 | putative protein | 1353 | Medicago nodulin N21-like protein |
| 1322 | calmodulin-like protein | 1354 | putative endo-1,4-beta glucanase |
| 1323 | hypothetical protein | 1355 | 1-aminocyclopropane-1-carboxylate oxidase |
| 1324 | cysteine proteinase like protein | 1356 | putative anion exchange protein |
| 1325 | heat shock protein 17.6-II | 1357 | SRG1-like protein |
| 1326 | heat shock protein 18 | 1358 | putative protein |
| 1327 | Arabidopsis mitochondrion-localized small heat shock protein (AtHSP23.6-mito) | 1359 | putative phi-1-like phosphate-induced protein |
| 1328 | unknown protein | 1360 | putative protein |
| 1329 | putative WRKY-type DNA binding protein | 1361 | putative embryo-abundant protein |
| 1330 | No function assigned by TIGR | 1362 | putative hydrolase |
| 1331 | hypothetical protein | 1363 | unknown protein |
| 1332 | putative integral membrane protein nodulin | 1364 | unknown protein |
| 1333 | putative protein | 1365 | hexose transporter - like protein |
| 1334 | unknown protein | 1366 | unknown protein |
| 1335 | 3-isopropylmalate dehydratase, small subunit | 1367 | unknown protein |
| 1336 | unknown protein | 1368 | peptide transport - like protein |
| 1337 | putative homeodomain transcription factor | 1369 | unknown protein |
| 1338 | unknown protein | 1370 | putative peptide transporter |
| 1339 | putative protein | 1371 | disease resistance protein, putative |
| 1340 | peroxidase ATP19a | 1372 | cysteine protease component of protease-inhibitor complex |
| 1341 | putative Na ⁺ /H ⁺ -exchanging protein | 1373 | putative cytochrome P450 |
| 1342 | putative auxin-regulated protein | 1374 | putative protein |
| 1343 | unknown protein | 1375 | hypothetical protein |
| 1344 | unknown protein | 1376 | unknown protein |
| 1345 | putative trehalose-6-phosphate synthase | 1377 | putative phosphoribosylaminoimidazolecarboxamide formyltransferase |
| 1346 | putative lectin | 1378 | putative protein |
| 1347 | Mlo protein-like | 1379 | HSP like protein |
| 1348 | unknown protein | 1380 | unknown protein |
| 1349 | ethylene response factor, putative | 1381 | unknown protein |
| 1350 | unknown protein | 1382 | putative cytochrome P450 |
| | | 1383 | similar to pectinesterase |
| | | 1384 | putative glucosyltransferase |
| | | 1385 | thaumatin-like protein |
| | | 1386 | drought-inducible cysteine proteinase RD19A precursor |
| | | 1387 | vegetative storage protein Vsp2 |
| | | 1388 | unknown protein |

TABLE 1 (cont)

| | | | |
|------|---|------|--|
| 1389 | unknown protein | 1417 | G-box binding bZIP transcription factor |
| 1390 | anthranilate N-benzoyltransferase - like protein | 1418 | putative protein |
| 1391 | delta-1-pyrroline 5-carboxylase synthetase (P5C1) | 1419 | putative protein |
| 1392 | glutathione S-conjugate transporting ATPase (AtMRP1) | 1420 | putative protein |
| 1393 | hypothetical protein | 1421 | ATFP4-like |
| 1394 | hypothetical protein | 1422 | unknown protein |
| 1395 | unknown protein | 1423 | unknown protein |
| 1396 | putative protein | 1424 | putative protein |
| 1397 | putative protein | 1425 | invertase inhibitor homolog (emb CAA73335.1) |
| 1398 | No function assigned by TIGR | 1426 | unknown protein |
| 1399 | unknown protein | 1427 | unknown protein |
| 1400 | putative protein kinase | 1428 | putative cytochrome b5 |
| 1401 | unknown protein | 1429 | putative protein |
| 1402 | hypothetical protein | 1430 | putative protein |
| 1403 | unknown protein | 1431 | putative protein |
| 1404 | putative calcium-binding EF-hand protein | 1432 | No function assigned by TIGR |
| 1405 | cinnamyl-alcohol dehydrogenase ELI3-1 | 1433 | putative copper/zinc superoxide dismutase |
| 1406 | putative protein | 1434 | protein phosphatase ABI1 |
| 1407 | unknown protein | 1435 | glutamate dehydrogenase 2 |
| 1408 | senescence-associated protein sen1 | 1436 | No function assigned by TIGR |
| 1409 | hypothetical protein | 1437 | low-temperature-induced protein 78 (sp Q06738) |
| 1410 | putative cytochrome P450 | 1438 | putative myo-inositol 1-phosphate synthase |
| 1411 | proline oxidase, mitochondrial precursor (osmotic stress-induced proline dehydrogenase) | 1439 | phosphate transporter (gb AAB17265.1) |
| 1412 | putative response regulator 3 | 1440 | 4-hydroxyphenylpyruvate dioxygenase (HPD) |
| 1413 | hypothetical protein | 1441 | histone H1 |
| 1414 | glutamine-dependent asparagine synthetase | 1442 | hypothetical protein |
| 1415 | lysine-ketoglutarate reductase/saccharopine | 1443 | No function assigned by TIGR |
| 1416 | En/Spm-like transposon protein | 1444 | neoxanthin cleavage enzyme-like protein |
| | | 1445 | dehydration-induced protein RD22 |
| | | 1446 | zinc finger protein ZAT7 |
| | | 1447 | unknown protein |
| | | 1448 | unknown protein |
| | | 1449 | unknown protein |
| | | 1450 | unknown protein |
| | | 1451 | putative protein |
| | | 1452 | putative protein |
| | | 1453 | RNA helicase, putative |

TABLE 1 (cont)

| | | | |
|------|--|------|--|
| 1454 | putative glycine-rich protein | 1483 | unknown protein |
| 1455 | hypothetical protein | 1484 | cold and ABA inducible protein kin1 |
| 1456 | putative protein | 1485 | gamma-VPE (vacuolar processing enzyme) |
| 1457 | peroxidase | 1486 | putative protein 1 photosystem II oxygen-evolving complex |
| 1458 | peroxidase ATP3a (emb CAA67340.1) | 1487 | myrosinase-associated protein, putative |
| 1459 | metallothionein-like protein | 1488 | transcription factor ATMYB4 |
| 1460 | endomembrane-associated protein | 1489 | H-protein promoter binding factor-2a |
| 1461 | ferritin 1 precursor | 1490 | ammonium transporter, putative |
| 1462 | dehydrin RAB18-like protein (sp P30185) | 1491 | putative zeta-carotene desaturase precursor |
| 1463 | HSR201 like protein | 1492 | high-affinity nitrate transporter NRT2 |
| 1464 | light regulated protein, putative | 1493 | light induced protein like |
| 1465 | Dr4(protease inhibitor) | 1494 | putative AT-hook DNA-binding protein |
| 1466 | mitogen activated protein kinase kinase (nMAPKK) | 1495 | putative glycogenin |
| 1467 | glutathione S-transferase | 1496 | putative light repressible receptor protein kinase |
| 1468 | transcriptional activator CBF1/ CRT/CRE binding factor 1 | 1497 | serine/threonine kinase - like protein |
| 1469 | homeobox-leucine zipper protein ATHB-12 | 1498 | putative peroxidase |
| 1470 | amino acid permease I | 1499 | cytochrome P450 monooxygenase (CYP83A1) |
| 1471 | MAP kinase (ATMPK7) | 1500 | MYB-related transcription factor (CCA1) |
| 1472 | potassium channel protein AKT3 | 1501 | Terminal flower1 (TFL1) |
| 1473 | cytochrome P450 monooxygenase (CYP91A2) | 1502 | sulfate transporter ATST1 |
| 1474 | putative transport protein | 1503 | RING-H2 finger protein RHA3b |
| 1475 | putative protein | 1504 | lipoxygenase, putative |
| 1476 | hypothetical protein | 1505 | serine O-acetyltransferase (EC 2.3.1.30) Sat-52 (pir S71207) |
| 1477 | putative protein | 1506 | ferulate-5-hydroxylase (FAH1) |
| 1478 | hypothetical protein | 1507 | En/Spm-like transposon protein, putative |
| 1479 | receptor protein kinase-like protein | 1508 | calmodulin-binding - like protein |
| 1480 | serine/threonine protein kinase - like protein | 1509 | hypothetical protein |
| 1481 | putative auxin-regulated protein | 1510 | somatic embryogenesis receptor-like kinase -like protein |
| 1482 | amino acid transport protein AAP2 | 1511 | putative gibberellin beta-hydroxylase |

TABLE 1 (cont)

| | | | |
|------|---|------|--|
| 1512 | putative pectinesterase | 1542 | 60S acidic ribosomal protein P0 |
| 1513 | putative protein | 1543 | putative protein |
| 1514 | unknown protein | 1544 | auxin-induced protein, putative |
| 1515 | ribosomal protein | 1545 | unknown protein |
| 1516 | low-temperature-induced 65 kD protein (sp Q04980) | 1546 | hypothetical protein |
| 1517 | putative glucosyltransferase | 1547 | protein phosphatase 2C ABI2 (PP2C) (sp O04719) |
| 1518 | peroxidase (emb CAA67551.1) | 1548 | peroxidase, prxr2 |
| 1519 | ankyrin-like protein | 1549 | putative peroxidase ATP12a |
| 1520 | ribosomal protein S11 - like | 1550 | putative beta-amylase |
| 1521 | hypothetical protein | 1551 | putative acetone-cyanohydrin lyase |
| 1522 | glycoprotein(EP1), putative | 1552 | fatty acid elongase 3-ketoacyl-CoA synthase 1 |
| 1523 | calnexin - like protein | 1553 | putative citrate synthase |
| 1524 | SRG1-like protein | 1554 | pEARLI 1-like protein |
| 1525 | ethylene response factor 1 (ERF1) | 1555 | putative MYB family transcription factor |
| 1526 | transcriptional activator CBF1-like protein | 1556 | putative transcription factor MYB28 |
| 1527 | xyloglucan endo-1,4-beta- D-glucanase (XTR-6) | 1557 | RNA helicase-like protein |
| 1528 | putative cinnamyl alcohol dehydrogenase | 1558 | snoRNA |
| 1529 | gibberellin 3 beta- hydroxylase, putative | 1559 | putative protein kinase |
| 1530 | auxin response transcription factor 3 (ETTIN/ARF3) | 1560 | growth regulator like protein |
| 1531 | No function assigned by TIGR | 1561 | putative potassium transporter |
| 1532 | putative protein | 1562 | putative protein |
| 1533 | similar to avrRpt2-induced protein 1 | 1563 | 60S ribosomal protein L14 |
| 1534 | unknown protein | 1564 | unknown protein |
| 1535 | hypothetical protein | 1565 | putative RING-H2 zinc finger protein |
| 1536 | putative protein kinase | 1566 | putative pollen surface protein |
| 1537 | respiratory burst oxidase - like protein | 1567 | unknown protein |
| 1538 | glucose-6- phosphate/phosphate- translocator precursor, putative | 1568 | unknown protein |
| 1539 | class 1 non-symbiotic hemoglobin (AHB1) | 1569 | unknown protein |
| 1540 | endochitinase isolog | 1570 | putative Ca ²⁺ -ATPase |
| 1541 | putative cytochrome P450 | 1571 | 1-aminocyclopropane-1- carboxylate synthase -like protein |
| | | 1572 | putative beta-glucosidase |
| | | 1573 | transcription factor ZAP1 |
| | | 1574 | oligopeptide transporter, putative |
| | | 1575 | putative protein |
| | | 1576 | putative glucosyltransferase |
| | | 1577 | putative serine/threonine kinase |
| | | 1578 | squalene epoxidase - like protein |
| | | 1579 | similar to 14KD proline-rich protein DC2.15 precursor |

TABLE 1 (cont)

| | | | |
|------|---|------|--|
| | (sp P14009); similar to ESTs emb Z17709 and emb Z47685 | 1612 | DnaJ-like protein |
| 1580 | unknown protein | 1613 | putative inositol polyphosphate-5- phosphatase |
| 1581 | unknown protein | 1614 | putative cytochrome P450 |
| 1582 | hypothetical protein | 1615 | putative protein |
| 1583 | 60S ribosomal protein L38 | 1616 | unknown protein |
| 1584 | flavin-containing monooxygenase, putative | 1617 | putative protein |
| 1585 | remorin | 1618 | hypothetical protein |
| 1586 | unknown protein | 1619 | putative protein |
| 1587 | putative protein | 1620 | sucrose-UDP glucosyltransferase |
| 1588 | lipoxygenase | 1621 | glucose-6-phosphate 1- dehydrogenase |
| 1589 | cold-regulated protein COR6.6 (KIN2) | 1622 | unknown protein |
| 1590 | Myb transcription factor homolog (ATR1) | 1623 | mitochondrial chaperonin (HSP60) |
| 1591 | putative protein | 1624 | sucrose transport protein SUC1 |
| 1592 | unknown protein | 1625 | putative protein disulfide isomerase |
| 1593 | unknown protein | 1626 | putative pollen-specific protein |
| 1594 | Ca ²⁺ -transporting ATPase - like protein | 1627 | integral membrane protein, putative |
| 1595 | protein phosphatase 2C (AtP2C-HA) | 1628 | rubredoxin, putative |
| 1596 | peroxidase ATP24a | 1629 | putative protein |
| 1597 | branched-chain alpha keto- acid dehydrogenase, putative | 1630 | disease resistance protein RPS4, putative |
| 1598 | putative beta-ketoacyl-CoA synthase | 1631 | putative peptide/amino acid transporter |
| 1599 | putative protein | 1632 | peroxidase, putative |
| 1600 | putative beta-galactosidase | 1633 | ethylene receptor, putative (ETR2) |
| 1601 | putative protein | 1634 | protein phosphatase 2C (PP2C) |
| 1602 | 60S ribosomal protein L27 | 1635 | putative glutathione S-transferase |
| 1603 | putative annexin | 1636 | homeodomain transcription factor (ATHB-7) |
| 1604 | NAC domain protein, putative | 1637 | putative nitrate transporter |
| 1605 | unknown protein | 1638 | putative ribosomal protein L9, cytosolic |
| 1606 | late embryogenesis abundant protein LEA like | 1639 | putative DNA-binding protein |
| 1607 | unknown protein | 1640 | beta-1,3-glucanase-like protein |
| 1608 | putative protein | 1641 | putative zinc transporter |
| 1609 | dehydrin Xero2 | 1642 | transcription factor TINY |
| 1610 | putative zinc finger protein | 1643 | putative aspartate kinase- homoserine dehydrogenase |
| 1611 | unknown protein | 1644 | ethylene response factor-like AP2 domain transcription factor |
| | | 1645 | peptide transporter - like protein |
| | | 1646 | trehalose-6-phosphate synthase like protein |

TABLE 1 (cont)

| | | | |
|------|---|------|---|
| 1647 | putative ribonuclease | 1676 | pathogenesis-related protein 1 precursor, 19.3K |
| 1648 | hypothetical protein | 1677 | R2R3-MYB transcription factor |
| 1649 | putative DNA-binding protein | 1678 | hypothetical protein |
| 1650 | nodulin-like protein | 1679 | putative chitinase |
| 1651 | trehalose-6-phosphate phosphatase - like protein | 1680 | Mlo protein, putative |
| 1652 | succinate dehydrogenase flavoprotein alpha subunit (emb CAA05025.1) | 1681 | putative WRKY-type DNA binding protein |
| 1653 | unknown protein | 1682 | putative acyl-CoA synthetase |
| 1654 | stress related protein, putative | 1683 | putative pathogenesis-related protein |
| 1655 | putative chloroplast initiation factor 3 | 1684 | putative chitinase |
| 1656 | putative protein | 1685 | germin precursor oxalate oxidase |
| 1657 | hypothetical protein | 1686 | endoxyloglucan transferase, putative |
| 1658 | putative CCCH-type zinc finger protein | 1687 | putative protein |
| 1659 | similar to harpin-induced protein hin1 from tobacco | 1688 | putative cytochrome P450 |
| 1660 | unknown protein | 1689 | similar to Mlo proteins from H. vulgare |
| 1661 | unknown protein | 1690 | putative tropinone reductase |
| 1662 | hypothetical protein | 1691 | extensin-like protein |
| 1663 | No function assigned by TIGR | 1692 | putative sarcosine oxidase |
| 1664 | putative protein | 1693 | putative protein |
| 1665 | putative glutathione S-transferase TSI-1 | 1694 | hypothetical protein |
| 1666 | putative protein | 1695 | late embryogenesis-abundant protein, putative |
| 1667 | putative PTR2 family peptide transporter | 1696 | beta-carotene hydroxylase |
| 1668 | receptor kinase-like protein | 1697 | putative calcium binding protein |
| 1669 | putative sugar transport protein, ERD6 | 1698 | unknown protein |
| 1670 | putative protein | 1699 | unknown protein |
| 1671 | nodulin-like protein | 1700 | predicted glycosyl transferase |
| 1672 | unknown protein | 1701 | hypothetical protein |
| 1673 | putative receptor-like protein kinase | 1702 | hypothetical protein |
| 1674 | glutathione-conjugate transporter AtMRP4 | 1703 | hypothetical protein |
| 1675 | ascorbate oxidase-like protein | 1704 | putative protein |
| | | 1705 | unknown protein |
| | | 1706 | putative protein |
| | | 1707 | putative protein |
| | | 1708 | serine/threonine kinase - like protein |
| | | 1709 | No function assigned by TIGR |
| | | 1710 | putative pectinesterase |
| | | 1711 | peroxidase like protein |
| | | 1712 | No function assigned by TIGR |

TABLE 1 (cont)

| | | | |
|------|--|------|---|
| 1713 | phenylalanine ammonia lyase (PAL1) | | Coenzyme A 3-O- methyltransferase |
| 1714 | peroxidase (emb CAA68212.1) | 1740 | disease resistance protein EDS1 |
| 1715 | putative AMP deaminase | 1741 | putative protein kinase |
| 1716 | putative MYB family transcription factor | 1742 | Glutathione reductase, chloroplast precursor |
| 1717 | DNA-directed RNA polymerase II, third largest subunit | 1743 | putative heat shock protein |
| 1718 | nucleotide pyrophosphatase -like protein | 1744 | aspartate kinase |
| 1719 | putative peroxidase | 1745 | putative major intrinsic (channel) protein |
| 1720 | calcium sensor homolog (gb AAC26110.1) | 1746 | matrix metalloproteinase, putative |
| 1721 | putative GDSL-motif lipase/hydrolase | 1747 | putative GDSL-motif lipase/hydrolase |
| 1722 | putative nonspecific lipid- transfer protein | 1748 | putative protein |
| 1723 | acyl-carrier protein (ACP), putative | 1749 | DAG-like protein |
| 1724 | putative glycine dehydrogenase | 1750 | serine/threonine kinase -like protein |
| 1725 | AIG1 | 1751 | formamidase - like protein |
| 1726 | ACC synthase (AtACS-6) | 1752 | CER2 |
| 1727 | cyclin delta-3 | 1753 | 26S proteasome subunit 4 |
| 1728 | putative RING zinc finger protein | 1754 | pectinesterase like protein |
| 1729 | aldose 1-epimerase - like protein | 1755 | putative disease resistance protein |
| 1730 | putative phospholipase | 1756 | putative RNA methyltransferase |
| 1731 | phosphoenolpyruvate carboxylase | 1757 | unknown protein |
| 1732 | putative galactinol synthase | 1758 | HOMEBOX PROTEIN KNOTTED-1 LIKE 4 (KNAT4) |
| 1733 | unknown protein | 1759 | glycine-rich RNA-binding protein AtGRP2 - like |
| 1734 | putative protein | 1760 | putative acetylornithine transaminase |
| 1735 | 1-aminocyclopropane-1- carboxylate oxidase | 1761 | putative Sec24-like COPII protein |
| 1736 | thioredoxin (clone GIF1) (pir S58118) | 1762 | putative berberine bridge enzyme |
| 1737 | trehalose-6-phosphate phosphatase | 1763 | putative GH3-like protein |
| 1738 | beta-1,3-glucanase 2 (BG2) (PR-2) | 1764 | putative ABC transporter |
| 1739 | putative S-adenosyl-L- methionine:trans-caffeoyl- | 1765 | putative reticuline oxidase-like protein |
| | | 1766 | pectate lyase - like protein |
| | | 1767 | protein disulfide-isomerase-like protein |
| | | 1768 | putative protein |
| | | 1769 | putative membrane transporter |
| | | 1770 | unknown protein |
| | | 1771 | unknown protein |
| | | 1772 | putative RING-H2 zinc finger protein |

TABLE 1 (cont)

| | | | |
|---------|------------------------------|------|-----------------------------------|
| 1773 | unknown protein | 1807 | glycine-rich RNA binding protein |
| 1774 | unknown protein | 7 | |
| 1775 | unknown protein | 1808 | dehydrin, putative |
| 1776 | MADS-box protein | 1809 | putative endoxyloglucan |
| (AGL20) | | | glycosyltransferase |
| 1777 | | 1810 | glutamate decarboxylase 1 (GAD |
| | amidophosphoribosyltransf | | 1) (sp Q42521) |
| | erase 2 precursor | 1811 | delta 9 desaturase |
| 1778 | putative dihydrodipicolinate | 1812 | UDP-glucose glucosyltransferase |
| | synthase | 1813 | CARBONIC ANHYDRASE 2 |
| 1779 | hypothetical protein | 1814 | response reactor 2 (ATRR2) |
| 1780 | ABA-responsive protein - | 1815 | S-adenosyl-methionine-sterol-C- |
| | like | | methyltransferase, putative |
| 1781 | putative protein | 1816 | putative DNA-binding protein |
| 1782 | hypothetical protein | | (RAV2-like) |
| 1783 | DNA-binding protein-like | 1817 | gamma glutamyl hydrolase, |
| 1784 | No function assigned by | | putative |
| | TIGR | 1818 | protein phosphatase - like |
| 1785 | transcription factor, | 1819 | unknown protein |
| | putative | 1820 | unknown protein |
| 1786 | nitrate reductase, putative | 1821 | unknown protein |
| 1787 | putative protein | 1822 | copper transport protein - like |
| 1788 | putative protein | | protein |
| 1789 | putative protein | 1823 | hypothetical protein |
| 1790 | putative protein | 1824 | unknown protein |
| 1791 | unknown protein | 1825 | putative peptide methionine |
| 1792 | unknown protein | | sulfoxide reductase |
| 1793 | tryptophan synthase beta- | 1826 | putative obtusifoliol 14-alpha |
| | subunit (TSB2) | | demethylase |
| 1794 | hypothetical protein | 1827 | glutamate dehydrogenase (EC |
| 1795 | putative protein | | 1.4.1.-) 1 (pir S71217) |
| 1796 | putative DNA-binding | 1828 | unknown protein |
| | protein | 1829 | xyloglucan endo-1,4-beta-D- |
| 1797 | putative 40S ribosomal | | glucanase precursor |
| | protein S10 | 1830 | unknown protein |
| 1798 | putative protein | 1831 | SNF1 related protein kinase |
| 1799 | putative cytochrome P450 | | (ATSRPK1) |
| 1800 | putative protein | 1832 | putative protein |
| 1801 | putative protein | 1833 | putative chloroplast nucleoid DNA |
| 1802 | putative glucosyltransferase | | binding protein |
| 1803 | No function assigned by | 1834 | hypothetical protein |
| | TIGR | 1835 | putative protein |
| 1804 | putative protein | 1836 | putative thiamin biosynthesis |
| 1805 | putative protein | | protein |
| 1806 | unknown protein | 1837 | unknown protein |

TABLE 1 (cont)

| | | | |
|------|---|------|--|
| 1838 | unknown protein | 1869 | putative tyrosine aminotransferase |
| 1839 | putative RNA helicase | 1870 | thionin |
| 1840 | putative SF21 protein { <i>Helianthus annuus</i> } | 1871 | No function assigned by TIGR |
| 1841 | unknown protein | 1872 | APETALA2 protein |
| 1842 | NBS/LRR disease resistance protein, putative | 1873 | MADS-box protein (AGL3) |
| 1843 | hypothetical protein | 1874 | putative monooxygenase |
| 1844 | unknown protein | 1875 | ZFP3 zinc finger protein |
| 1845 | No function assigned by TIGR | 1876 | cell division protein FtsZ chloroplast homolog precursor (sp Q42545) |
| 1846 | glycine-rich protein (AtGRP2) | 1877 | calreticulin, putative |
| 1847 | No function assigned by TIGR | 1878 | phosphoserine aminotransferase |
| 1848 | putative protein | 1879 | 12-oxophytodienoate-10,11- reductase |
| 1849 | putative glucosyltransferase | 1880 | putative bHLH transcription factor |
| 1850 | hypothetical protein | 1881 | pectin methylesterase (PMEU1), putative |
| 1851 | hypothetical protein | 1882 | DNA-binding protein |
| 1852 | putative protein | 1883 | carnitine racemase like protein |
| 1853 | putative disease resistance protein | 1884 | putative protein |
| 1854 | thaumatin, putative | 1885 | endoxyloglucan transferase (dbj BAA81669.1) |
| 1855 | putative proline-rich protein | 1886 | RMA1 RING zinc finger protein |
| 1856 | sterol-C-methyltransferase | 1887 | ammonium transporter |
| 1857 | superoxidase dismutase | 1888 | apyrase (gb AAF00612.1) |
| 1858 | TINY-like protein | 1889 | potassium uptake transporter - like protein |
| 1859 | calcium-dependent protein kinase, putative | 1890 | putative ABC transporter |
| 1860 | hypothetical protein | 1891 | potassium transporter-like protein |
| 1861 | putative protein kinase | 1892 | integral membrane protein, putative |
| 1862 | DNA-directed RNA polymerase (mitochondrial) | 1893 | putative protein |
| 1863 | putative DNA-binding protein | 1894 | pyruvate decarboxylase-1 (Pdc1) |
| 1864 | late embryogenesis abundant M17 protein | 1895 | putative malate oxidoreductase |
| 1865 | putative protein | 1896 | putative histone H2B |
| 1866 | delta-1-pyrroline-5- carboxylate synthetase | 1897 | snoRNA |
| 1867 | putative 60s ribosomal protein L10 | 1898 | symbiosis-related like protein |
| 1868 | cytochrome P450 CYP86A1 | 1899 | unknown protein |
| | | 1900 | unknown protein |
| | | 1901 | hypothetical protein |
| | | 1902 | putative protein |
| | | 1903 | copper-binding protein-like |
| | | 1904 | putative protein |
| | | 1905 | unknown protein |
| | | 1906 | putative glyoxalase II |

TABLE 1 (cont)

| | | | |
|------|---|------|--|
| 1907 | No function assigned by TIGR | 1936 | serine/threonine protein kinase, putative |
| 1908 | hypothetical protein | 1937 | potassium transporter - like protein |
| 1909 | flavanone 3-hydroxylase (FH3) | 1938 | lactate dehydrogenase (LDH1) |
| 1910 | putative laccase | 1939 | hypothetical protein |
| 1911 | putative protein kinase | 1940 | unknown protein |
| 1912 | myb-related protein, 33.3K (pir S71284) | 1941 | putative thaumatin |
| 1913 | unknown protein | 1942 | putative reticuline oxidase-like protein |
| 1914 | endo-xyloglucan transferase - like protein | 1943 | uracil phosphoribosyltransferase, putative |
| 1915 | TMV resistance protein N - like | 1944 | transcription factor, putative |
| 1916 | putative xyloglucan endotransglycosylase | 1945 | unknown protein |
| 1917 | unknown protein | 1946 | unknown protein |
| 1918 | proline transporter 2 | 1947 | GATA transcription factor 4 |
| 1919 | resistance protein, putative | 1948 | unknown protein |
| 1920 | actin, putative | 1949 | unknown protein |
| 1921 | putative related to microbial divalent cation tolerance proteins | 1950 | senescence-associated protein -like |
| 1922 | unknown protein | 1951 | putative pollen allergen |
| 1923 | putative glycosyl transferase | 1952 | unknown protein |
| 1924 | unknown protein | 1953 | putative protein |
| 1925 | putative protein phosphatase 2C | 1954 | glycine-rich protein |
| 1926 | unknown protein | 1955 | putative protein |
| 1927 | serpin, putative | 1956 | 3-methyladenine DNA glycosylase, putative |
| 1928 | cinnamyl-alcohol dehydrogenase CAD1 | 1957 | endoplasmic reticulum-type calcium-transporting ATPase 4 |
| 1929 | putative protein import receptor | 1958 | putative pectinesterase |
| 1930 | unknown protein | 1959 | cytochrome P450-like protein |
| 1931 | unknown protein | 1960 | RNA-binding protein (cp33) |
| 1932 | putative protein | 1961 | CONSTANS-like 1 |
| 1933 | putative CDP-diacylglycerol--glycerol-3-phosphate 3-phosphatidyltransferase | 1962 | putative small heat shock protein |
| 1934 | unknown protein | 1963 | hypothetical protein |
| 1935 | putative LRR receptor-like protein kinase | 1964 | unknown protein |
| | | 1965 | cytochrome P450 - like protein |
| | | 1966 | cysteine proteinase inhibitor like protein |
| | | 1967 | nicotianamine synthase (dbj BAA74589.1) |
| | | 1968 | copper amine oxidase like protein (fragment2) |
| | | 1969 | putative SCARECROW gene regulator |
| | | 1970 | unknown protein |
| | | 1971 | unknown protein |

TABLE 1 (cont)

| | | | |
|------|--|------|--|
| 1972 | putative alanine acetyl transferase | 2001 | auxin response factor 1 |
| 1973 | unknown protein | 2002 | pathogenesis-related protein 1 precursor, 18.9K |
| 1974 | unknown protein | 2003 | hypothetical protein |
| 1975 | unknown protein | 2004 | unknown protein |
| 1976 | putative extensin | 2005 | zinc finger protein Zat12 |
| 1977 | putative protein kinase | 2006 | unknown protein |
| 1978 | putative protein kinase | 2007 | unknown protein |
| 1979 | NADPH-dependent codeinone reductase, putative | 2008 | cyclin, putative |
| 1980 | peroxidase | 2009 | 2-dehydro-3-deoxyphosphoheptonate aldolase |
| 1981 | putative cytochrome P450 | 2010 | glutathione synthetase gsh2 |
| 1982 | No function assigned by TIGR | 2011 | heat shock protein 17 |
| 1983 | putative zinc-finger protein (B-box zinc finger domain) | 2012 | putative Na ⁺ -dependent inorganic phosphate cotransporter |
| 1984 | putative tyrosine aminotransferase | 2013 | No function assigned by TIGR |
| 1985 | hypothetical protein | 2014 | unknown protein |
| 1986 | DNA binding protein | 2015 | putative protein |
| 1987 | putative fatty acid elongase | 2016 | similar to RING-H2 finger protein RHC1a GB:AAC69854 GI:3790583 from [Arabidopsis thaliana] |
| 1988 | bZIP transcription factor - like protein | 2017 | calcium-binding protein - like |
| 1989 | xyloglucan fucosyltransferase, putative | 2018 | putative protein |
| 1990 | unknown protein | 2019 | putative aldehyde dehydrogenase |
| 1991 | unknown protein | 2020 | auxin-responsive GH3 - like protein |
| 1992 | putative protein | 2021 | putative protein |
| 1993 | myb factor, putative | 2022 | Phosphoglycerate dehydrogenase - like protein |
| 1994 | Myb-family transcription factor, putative | 2023 | unknown protein |
| 1995 | putative fructose bisphosphate aldolase | 2024 | unknown protein |
| 1996 | myrosinase-associated protein, putative | 2025 | PSI type III chlorophyll a/b-binding protein, putative |
| 1997 | cytochrome P450 like protein | 2026 | putative protein |
| 1998 | similar to SOR1 from the fungus <i>Cercospora nicotianae</i> | 2027 | putative protein |
| 1999 | similar to embryo-abundant protein GB:L47672 GI:1350530 from [<i>Picea glauca</i>] | 2028 | glutaredoxin, putative |
| 2000 | alcohol dehydrogenase | 2029 | hypothetical protein |
| | | 2030 | No function assigned by TIGR |
| | | 2031 | putative protein |
| | | 2032 | jasmonate inducible protein, putative |
| | | 2033 | putative polygalacturonase isoenzyme 1 beta subunit |
| | | 2034 | putative small heat shock protein |

TABLE 1 (cont)

| | | | |
|------|--|------|--|
| 2035 | unknown protein | 2068 | putative chlorophyll A-B binding protein |
| 2036 | putative disease resistance protein | 2069 | Lhcb3 chlorophyll a/b binding protein (gb AAD28773.1) |
| 2037 | putative protein | 2070 | luminal binding protein (dbj BAA13948.1) |
| 2038 | ethylene-responsive element binding factor, putative | 2071 | hydroxypyruvate reductase (HPR) |
| 2039 | putative protein | 2072 | epoxide hydrolase (ATsEH) |
| 2040 | Pollen-specific protein precursor like | 2073 | putative protein (fragment) |
| 2041 | putative protein | 2074 | unknown protein |
| 2042 | unknown protein | 2075 | hypothetical protein |
| 2043 | EF-Hand containing protein -like | 2076 | putative glucosyl transferase |
| 2044 | unknown protein | 2077 | putative glucosyl transferase |
| 2045 | putative calcium-transporting ATPase | 2078 | putative 3-methylcrotonyl-CoA carboxylase |
| 2046 | antifungal protein-like (PDF1.2) | 2079 | putative peroxidase |
| 2047 | pathogenesis-related PR-1-like protein | 2080 | acyl-CoA oxidase (gb AAC13497.1) |
| 2048 | similar to Mlo proteins from <i>H. vulgare</i> | 2081 | alternative oxidase 1a precursor |
| 2049 | putative steroid sulfotransferase | 2082 | putative transcription factor (MYB4) |
| 2050 | trehalase - like protein | 2083 | serine acetyltransferase |
| 2051 | thioredoxin f1 | 2084 | ATP-sulfurylase |
| 2052 | unknown protein | 2085 | calreticulin (crt1) |
| 2053 | alanine-glyoxylate aminotransferase | 2086 | putative prohibitin 2 |
| 2054 | integral membrane protein, putative | 2087 | putative monodehydroascorbate reductase |
| 2055 | hypothetical protein | 2088 | branched-chain alpha-keto acid decarboxylase E1 beta subunit |
| 2056 | unknown protein | 2089 | cytokinin oxidase - like protein |
| 2057 | hypothetical protein | 2090 | putative receptor-like protein kinase |
| 2058 | unknown protein | 2091 | unknown protein |
| 2059 | unknown protein | 2092 | hypothetical protein |
| 2060 | unknown protein | 2093 | No function assigned by TIGR |
| 2061 | drought-induced-19-like 1 | 2094 | putative APG protein |
| 2062 | unknown protein | 2095 | glutathione S-transferase, putative |
| 2063 | putative protein | 2096 | phytochrome-associated protein 1 (PAP1) |
| 2064 | putative protein | 2097 | amidophosphoribosyltransferase |
| 2065 | AIG2-like protein | 2098 | nonphototropic hypocotyl 1 |
| 2066 | Lhca2 protein | 2099 | 3-keto-acyl-CoA thiolase 2 (gb AAC17877.1) |
| 2067 | phytocyanin | 2100 | pEARLI 1 |
| | | 2101 | glutathione reductase, cytosolic |

TABLE 1 (cont)

| | | | |
|------|--|------|---|
| 2102 | putative protein | 2128 | putative protein disulfide-isomerase |
| 2103 | putative protein | 2129 | unknown protein |
| 2104 | putative aldehyde oxidase | 2130 | beta-1,3-glucanase class I precursor |
| 2105 | probable photosystem I chain XI precursor | 2131 | homeobox-leucine zipper protein HAT5 (HD-ZIP protein 5) (HD-ZIP protein ATHB-1) |
| 2106 | photosystem II polypeptide, putative | 2132 | putative cyclic nucleotide-regulated ion channel protein |
| 2107 | photosystem II reaction center 6.1KD protein | 2133 | P II nitrogen sensing protein GLB I |
| 2108 | 33 kDa polypeptide of oxygen-evolving complex (OEC) in photosystem II (emb CAA75629.1) | 2134 | H-protein promoter binding factor-1 (gb AAC24592.1) |
| 2109 | 60S ribosomal protein | 2135 | GAST1-like protein |
| L11B | | 2136 | cytochrome P450 GA3 |
| 2110 | extA (emb CAA47807.1) | 2137 | putative protein |
| 2111 | zinc finger protein OBP4 - like | 2138 | Myb-related transcription factor-like protein |
| 2112 | sterol delta7 reductase | 2139 | putative phloem-specific lectin |
| 2113 | putative RAS-related protein, RAB11C | 2140 | protein kinase - like protein |
| 2114 | glucosyltransferase like protein | 2141 | unknown protein |
| 2115 | zinc finger protein (PMZ), putative | 2142 | SCARECROW transcriptional regulator-like |
| 2116 | 6,7-dimethyl-8-ribityllumazine synthase precursor | 2143 | unknown protein |
| 2117 | putative protein | 2144 | unknown protein |
| 2118 | osmotin precursor | 2145 | putative protein |
| 2119 | No function assigned by TIGR | 2146 | calnexin homolog |
| 2120 | ferredoxin precursor isolog | 2147 | PP1/PP2A phosphatases |
| 2121 | GH3 like protein | | pleiotropic regulator PRL2 |
| 2122 | non-specific lipid transfer protein | 2148 | xyloglucan endotransglycosylase, putative |
| 2123 | homeodomain transcription factor (HAT9) | 2149 | putative calmodulin |
| 2124 | putative cytochrome P450 monooxygenase | 2150 | spermine synthase (ACL5) |
| 2125 | putative protein kinase | 2151 | snoRNA |
| 2126 | putative protein | 2152 | photosystem I subunit V precursor, putative |
| 2127 | glyceraldehyde-3-phosphate dehydrogenase | 2153 | putative potassium transporter |
| | | 2154 | Homeodomain - like protein |
| | | 2155 | putative protein |
| | | 2156 | unknown protein |
| | | 2157 | CALMODULIN-RELATED PROTEIN 2, TOUCH-INDUCED (TCH2) |
| | | 2158 | putative protein phosphatase 2C |

TABLE 1 (cont)

| | | | |
|------|--|------|--|
| 2159 | monosaccharide transport protein, STP4 | 2187 | defender against cell death protein |
| 2160 | hypothetical protein | 2188 | AP2 domain containing protein, putative |
| 2161 | unknown protein | 2189 | actin depolymerizing factor - like protein |
| 2162 | hypothetical protein | 2190 | putative calcium-dependent protein kinase (U90439) |
| 2163 | putative protein kinase | 2191 | phosphoribosylanthranilate transferase, putative |
| 2164 | putative serine/threonine protein kinase | 2192 | oligopeptide transporter, putative |
| 2165 | jasmonate inducible protein, putative | 2193 | calmodulin-like protein |
| 2166 | similar to several small proteins (~100 aa) that are induced by heat, auxin, ethylene and wounding such as <i>Phaseolus aureus</i> indole-3-acetic acid induced protein ARG (SW:32292) | 2194 | putative protease inhibitor |
| 2167 | unknown protein | 2195 | MAP kinase |
| 2168 | MYB-like protein | 2196 | DNA binding protein MybSt1, putative |
| 2169 | putative protein kinase | 2197 | putative protein |
| 2170 | unknown protein | 2198 | putative protein |
| 2171 | CLC-d chloride channel protein | 2199 | unknown protein |
| 2172 | cytochrome P450-like protein | 2200 | unknown protein |
| 2173 | putative glutathione S-transferase | 2201 | unknown protein |
| 2174 | putative mandelonitrile lyase | 2202 | putative protein |
| 2175 | hypothetical protein | 2203 | unknown protein |
| 2176 | putative trypsin inhibitor | 2204 | unknown protein |
| 2177 | male sterility 2-like protein (emb CAA68191.1) | 2205 | hypothetical protein |
| 2178 | unknown protein | 2206 | uncharacterized protein |
| 2179 | unknown protein | 2207 | putative protein |
| 2180 | putative protein | 2208 | hypothetical protein |
| 2181 | putative peroxidase | 2209 | peroxidase (emb CAA66967.1) |
| 2182 | putative thromboxane-A synthase | 2210 | putative flavonol 3-O-glucosyltransferase |
| 2183 | putative cytochrome P450 | 2211 | putative flavonol 3-O-glucosyltransferase |
| 2184 | peroxidase ATP21a | 2212 | putative protein |
| 2185 | unknown protein | 2213 | glycerol-3-phosphate acyltransferase |
| 2186 | putative glutathione S-transferase | 2214 | putative beta-1,3-glucanase |
| | | 2215 | putative ethylene response element binding protein (EREBP) |
| | | 2216 | putative CONSTANS-like B-box zinc finger protein |
| | | 2217 | putative protein |
| | | 2218 | unknown protein |
| | | 2219 | putative trehalose-6-phosphate phosphatase (AtTPPA) |
| | | 2220 | putative protein |

TABLE 1 (cont)

| | | | |
|------|---|------|--|
| 2221 | putative protein | 2251 | lysine and histidine specific transporter, putative |
| 2222 | unknown protein | 2252 | putative protein |
| 2223 | unknown prptein | 2253 | putative protein |
| 2224 | unknown protein | 2254 | putative sugar transporter protein |
| 2225 | hypothetical protein | 2255 | 12S cruciferin seed storage protein |
| 2226 | putative metal-binding protein | 2256 | putative auxin-induced protein, IAA17/AXR3-1 |
| 2227 | putative phosphoribosylglycinamide synthetase | 2257 | putative cyclin D |
| 2228 | unknown protein | 2258 | farnesyl diphosphate synthase precursor (gb AAB49290.1) |
| 2229 | putative protein | 2259 | putative potassium transport protein (TRH1) |
| 2230 | unknown protein | 2260 | putative NPK1-related MAP kinase |
| 2231 | unknown protein | 2261 | putative protein |
| 2232 | putative beta-galactosidase | 2262 | putative ABC transporter |
| 2233 | putative protein kinase | 2263 | putative DNA-directed RNA polymerase subunit |
| 2234 | putative protein | 2264 | putative small nuclear ribonucleoprotein E |
| 2235 | putative protein phosphatase 2C | 2265 | unknown protein |
| 2236 | putative growth regulator protein | 2266 | reticuline oxidase - like protein |
| 2237 | putative ABC transporter | 2267 | putative 1-aminocyclopropane-1-carboxylate oxidase |
| 2238 | chloride channel (emb CAA70310.1) | 2268 | similar to Mlo proteins from H. vulgare |
| 2239 | adrenodoxin - like protein | 2269 | long-chain-fatty-acid--CoA ligase-like protein |
| 2240 | NAM (no apical meristem)-like protein | 2270 | putative protein |
| 2241 | putative transcription factor MYB41 | 2271 | chromatin remodelling complex ATPase chain ISWI-like protein |
| 2242 | Myb DNA binding protein - like | 2272 | hypothetical protein |
| 2243 | AtMYB84 | 2273 | latex-abundant protein, putative |
| 2244 | photosystem II type I chlorophyll a/b binding protein | 2274 | N-acetylornithine deacetylase-like protein, fragment |
| 2245 | putative aspartic proteinase | 2275 | putative DNA-binding protein |
| 2246 | jasmonate inducible protein, putative | 2276 | putative anthranilate N-hydroxycinnamoyl/benzoyltransferase |
| 2247 | putative protein | 2277 | putative DNA binding protein |
| 2248 | No function assigned by TIGR | 2278 | cytochrome P450 - like protein |
| 2249 | putative phosphatidylserine synthase | 2279 | putative DNA-binding protein |
| 2250 | putative nicotianamine synthase | 2280 | putative peptide transporter |
| | | 2281 | putative reticuline oxidase-like protein |

TABLE 1 (cont)

| | | | |
|------|--|------|--|
| 2282 | thioredoxin, putative | 2313 | putative protein kinase |
| 2283 | nodulin-like protein | 2314 | indoleacetic acid (IAA)-inducible gene (IAA7) |
| 2284 | UDP-galactose transporter - like protein | 2315 | ATP-dependent Clp protease regulatory subunit CLPX |
| 2285 | putative fibrillin | 2316 | DNA-binding protein RAV1 |
| 2286 | unknown protein | 2317 | putative protein |
| 2287 | unknown protein | 2318 | hypothetical protein |
| 2288 | unknown protein | 2319 | unknown protein |
| 2289 | hypothetical protein | 2320 | unknown protein |
| 2290 | glyceraldehyde 3-phosphate dehydrogenase A subunit (GapA) | 2321 | putative protein |
| 2291 | predicted protein of unknown function | 2322 | putative thioredoxin reductase |
| 2292 | putative protein | 2323 | unknown protein |
| 2293 | putative protein | 2324 | putative lectin |
| 2294 | myb-like protein | 2325 | No function assigned by TIGR |
| 2295 | hypothetical protein | 2326 | beta-fructosidase |
| 2296 | putative U5 small nuclear ribonucleoprotein, an RNA helicase | 2327 | chlorophyll a/b-binding protein CP29 |
| 2297 | unknown protein | 2328 | photosystem I subunit PSI-E - like protein |
| 2298 | cinnamyl alcohol dehydrogenase - like protein | 2329 | peroxidase ATP8a |
| 2299 | hypothetical protein similar to extensin-like protein | 2330 | putative fructose bisphosphate aldolase |
| 2300 | unknown protein | 2331 | zinc finger protein ATZF1, putative |
| 2301 | putative chlorophyll a/b binding protein | 2332 | DegP protease precursor |
| 2302 | probable plasma membrane intrinsic protein 1c | 2333 | transcription factor-like protein |
| 2303 | hexokinase (ATHXK2) | 2334 | calcium-dependent protein kinase |
| 2304 | calcium-dependent protein kinase | 2335 | hypothetical protein |
| 2305 | 5'-adenylylphosphosulfate reductase, putative | 2336 | putative protein |
| 2306 | Erd1 protein precursor (sp P42762) | 2337 | glucose-1-phosphate adenylyltransferase (APL3) |
| 2307 | putative protein | 2338 | No function assigned by TIGR |
| 2308 | putative protein | 2339 | putative Eukaryotic initiation factor 4A |
| 2309 | unknown protein | 2340 | No function assigned by TIGR |
| 2310 | BCS1 protein-like protein | 2341 | unknown protein |
| 2311 | putative protein | 2342 | beta tubulin 1, putative |
| 2312 | putative protein | 2343 | one helix protein (OHP) |
| | | 2344 | No function assigned by TIGR |
| | | 2345 | zinc finger protein 5, ZFP5 |
| | | 2346 | putative MYB family transcription factor |
| | | 2347 | putative amino acid transporter protein |

TABLE 1 (cont)

| | | | |
|------|---|------|---|
| 2348 | putative potassium transporter | 2374 | putative PHD-type zinc finger protein |
| 2349 | protein kinase (AFC2) | 2375 | nuclear RNA binding protein A-like protein |
| 2350 | putative protein | 2376 | unknown protein |
| 2351 | No function assigned by TIGR | 2377 | unknown protein |
| 2352 | putative ubiquitin-conjugating enzyme E2 | 2378 | unknown protein |
| 2353 | unknown protein | 2379 | putative amino-cyclopropane-carboxylic acid oxidase (ACC oxidase) |
| 2354 | cytochrome P450 monooxygenase (CYP71B3) | 2380 | hypothetical protein |
| 2355 | putative myrosinase-binding protein | 2381 | indole-3-acetate beta-glucosyltransferase like protein |
| 2356 | putative vacuolar sorting receptor | 2382 | predicted protein |
| 2357 | uridine diphosphate glucose epimerase | 2383 | unknown protein |
| 2358 | shaggy related protein kinase, ASK-GAMMA | 2384 | No function assigned by TIGR |
| 2359 | ankyrin repeat protein EMB506 | 2385 | putative photosystem I reaction center subunit IV |
| 2360 | putative beta-alanine-pyruvate aminotransferase | 2386 | putative homeodomain transcription factor |
| 2361 | putative alcohol dehydrogenase | 2387 | putative purple acid phosphatase precursor |
| 2362 | putative receptor-like protein kinase | 2388 | No function assigned by TIGR |
| 2363 | unknown protein | 2389 | nitrate reductase 1 (NR1) |
| 2364 | putative methylmalonate semi-aldehyde dehydrogenase | 2390 | putative casein kinase II beta subunit |
| 2365 | hypothetical protein | 2391 | pEARLI 1-like protein |
| 2366 | unknown protein | 2392 | putative protein |
| 2367 | peroxidase ATP13a | 2393 | No function assigned by TIGR |
| 2368 | putative glutathione peroxidase | 2394 | unknown protein |
| 2369 | squamosa promoter binding protein-like 7 | 2395 | putative cell wall-plasma membrane disconnecting CLCT protein (AIR1A) |
| 2370 | photosystem II core complex protein, putative | 2396 | unknown protein |
| 2371 | snoRNA | 2397 | scarecrow-like 11 - like |
| 2372 | photosystem I subunit X precursor | 2398 | putative anthocyanidin synthase |
| 2373 | MYB transcription factor (Atmyb2) | 2399 | putative AP2 domain transcription factor |
| | | 2400 | caffeoyl-CoA O-methyltransferase - like protein |
| | | 2401 | unknown protein |
| | | 2402 | putative protein kinase |
| | | 2403 | cytochrome P450 -like protein |
| | | 2404 | putative MADS-box protein ANR1 |
| | | 2405 | putative glutathione S-transferase |

TABLE 1 (cont)

| | | | |
|------|--|------|---|
| 2406 | hypothetical protein | 2437 | putative protein |
| 2407 | similar to gibberellin-regulated proteins | 2438 | unknown protein |
| 2408 | unknown protein | 2439 | unknown protein |
| 2409 | putative sensory transduction histidine kinase | 2440 | putative protein |
| 2410 | similar to late embryogenesis abundant proteins | 2441 | No function assigned by TIGR |
| 2411 | unknown protein | 2442 | MADS-box protein AGL14 |
| 2412 | putative protein | 2443 | No function assigned by TIGR |
| 2413 | putative ATP-dependent RNA helicase | 2444 | peptidylprolyl isomerase |
| 2414 | putative protein | 2445 | putative s-adenosylmethionine synthetase |
| 2415 | putative sucrose synthetase | 2446 | peroxidase |
| 2416 | beta-fructofuranosidase 1 | 2447 | ferrochelatase-I |
| 2417 | putative indole-3-acetate beta-glucosyltransferase | 2448 | putative eukaryotic initiation factor 4, eIF4 |
| 2418 | hypothetical protein | 2449 | drought-inducible cysteine proteinase RD21A precursor -like protein |
| 2419 | DNA-directed RNA polymerase II, third largest subunit | 2450 | unknown protein |
| 2420 | putative transcription factor | 2451 | unknown protein |
| 2421 | homeobox-leucine zipper protein ATHB-5 (HD-zip protein ATHB-5) (sp P46667) | 2452 | No function assigned by TIGR |
| 2422 | putative ftsH chloroplast protease | 2453 | No function assigned by TIGR |
| 2423 | replication protein A1 - like | 2454 | salt-inducible like protein |
| 2424 | hypothetical protein | 2455 | glucose-6-phosphate 1-dehydrogenase |
| 2425 | unknown protein | 2456 | 3-hydroxy-3-methylglutaryl CoA reductase (AA 1-592) |
| 2426 | unknown protein | 2457 | hypothetical protein |
| 2427 | putative methionine aminopeptidase | 2458 | putative protein |
| 2428 | unknown protein | 2459 | putative putative 60S ribosomal protein L17 |
| 2429 | fatty acid elongase - like protein (cer2-like) | 2460 | putative inorganic pyrophosphatase |
| 2430 | unknown protein | 2461 | putative gamma-glutamyltransferase |
| 2431 | putative disease resistance response protein | 2462 | heat shock transcription factor - like protein |
| 2432 | putative protein | 2463 | mitochondrial chaperonin hsp60 |
| 2433 | unknown protein | 2464 | unknown protein |
| 2434 | putative protein | 2465 | putative zinc finger protein identical to T10M13.22 |
| 2435 | putative protein | 2466 | putative uridylyl transferase |
| 2436 | unknown protein | 2467 | nodulin-like protein |
| | | 2468 | putative B-box zinc finger protein |
| | | 2469 | No function assigned by TIGR |
| | | 2470 | putative metalloproteinase |

TABLE 1 (cont)

| | | | |
|------|--|------|---|
| 2471 | putative cellular apoptosis susceptibility protein | 2504 | unknown protein |
| 2472 | hypothetical protein | 2505 | unknown protein |
| 2473 | hypothetical protein | 2506 | 60S ribosomal protein L10A |
| 2474 | scarecrow-like 13 (SCL13) | 2507 | putative protein |
| 2475 | putative nucleoside triphosphatase | 2508 | receptor protein kinase (IRK1), putative |
| 2476 | unknown protein | 2509 | putative nematode-resistance protein |
| 2477 | No function assigned by TIGR | 2510 | tubulin alpha-5 chain-like protein |
| 2478 | hypothetical protein | 2511 | putative DNA-binding protein |
| 2479 | putative phospholipase | 2512 | unknown protein |
| 2480 | putative snRNP protein | 2513 | putative RGA1, giberellin response modulation protein |
| 2481 | putative protein | 2514 | non phototropic hypocotyl 1-like |
| 2482 | putative lipase | 2515 | RING-H2 finger protein RHA1b |
| 2483 | putative nonsense-mediated mRNA decay protein | 2516 | putative myb-protein |
| 2484 | No function assigned by TIGR | 2517 | hydroperoxide lyase (HPOL) like protein |
| 2485 | protochlorophyllide reductase precursor | 2518 | serine/threonine-protein kinase, PK7 |
| 2486 | No function assigned by TIGR | 2519 | putative vacuolar proton-ATPase subunit |
| 2487 | trehalose-6-phosphate synthase, putative | 2520 | putative polygalacturonase |
| 2488 | unknown protein | 2521 | putative ribosomal protein L8 |
| 2489 | germin-like protein | 2522 | putative adenylate kinase |
| 2490 | plastid protein | 2523 | germin-like protein (GLP10) |
| 2491 | putative protein | 2524 | putative chlorophyll a/b binding protein |
| 2492 | hypothetical protein | 2525 | chloroplast single subunit DNA-dependent RNA polymerase |
| 2493 | unknown protein | 2526 | putative protein |
| 2494 | unknown protein | 2527 | hypothetical protein |
| 2495 | histone deacetylase-like protein | 2528 | hypothetical protein |
| 2496 | unknown protein | 2529 | b-keto acyl reductase, putative |
| 2497 | unknown protein | 2530 | cellulose synthase catalytic subunit |
| 2498 | putative protein | 2531 | putative 1-aminocyclopropane-1-carboxylate oxidase |
| 2499 | putative protein | 2532 | S-linalool synthase, putative |
| 2500 | No function assigned by TIGR | 2533 | phosphoribosyl-ATP pyrophosphohydrolase (At-IE) |
| 2501 | putative zinc transporter ZIP2 - like | 2534 | disease resistance RPP5 like protein (fragment) |
| 2502 | unknown protein | 2535 | putative protein |
| 2503 | putative ribosomal-protein S6 kinase (ATPK19) | 2536 | beta-galactosidase like protein |

TABLE 1 (cont)

| | | | |
|------|---|------|---|
| 2537 | putative translation initiation factor eIF-2, gamma subunit | 2566 | unknown protein |
| 2538 | ankyrin like protein | 2567 | unknown protein |
| 2539 | histone H2A- like protein | 2568 | unknown protein |
| 2540 | putative protein | 2569 | serine/threonine kinase - like protein |
| 2541 | salt-tolerance zinc finger protein | 2570 | peroxidase (emb CAA66960.1) |
| 2542 | unknown protein | 2571 | putative protein |
| 2543 | putative protein | 2572 | hypothetical protein |
| 2544 | fructose-bisphosphate aldolase | 2573 | glycine-rich protein 2 (GRP2) |
| 2545 | peroxidase (emb CAA66964.1) | 2574 | unknown protein |
| 2546 | patatin-like protein | 2575 | berberine bridge enzyme-like protein |
| 2547 | salt-inducible protein homolog | 2576 | unknown protein |
| 2548 | hypothetical protein | 2577 | putative WD-repeat protein |
| 2549 | xyloglucan endo-transglycosylase-like protein | 2578 | serine/threonine kinase - like protein |
| 2550 | trihelix DNA-binding protein (GT2) | 2579 | serine /threonine kinase - like protein |
| 2551 | ubiquitin-conjugating enzyme 16, putative | 2580 | Cu ²⁺ -transporting ATPase-like protein |
| 2552 | homeobox protein | 2581 | translation initiation factor eIF4E |
| 2553 | envelope Ca ²⁺ -ATPase | 2582 | O-methyltransferase - like protein |
| 2554 | snap25a | 2583 | translation initiation factor eIF3 - like protein |
| 2555 | putative annexin | 2584 | No function assigned by TIGR |
| 2556 | putative protein | 2585 | unknown protein |
| 2557 | homeodomain transcription factor (ATHB-14) | 2586 | hypothetical protein |
| 2558 | heat shock protein, putative | 2587 | unknown protein |
| 2559 | peroxidase ATP23a | 2588 | unknown protein |
| 2560 | p68 RNA helicase, putative | 2589 | glycine-rich protein iike |
| 2561 | potassium transporter, putative | 2590 | putative disease resistance protein |
| 2562 | putative eukaryotic translation initiation factor 2 alpha subunit, eIF2 | 2591 | putative Na ⁺ /Ca ²⁺ antiporter |
| 2563 | hypothetical protein | 2592 | putative hydroxymethylglutaryl-CoA lyase |
| 2564 | carnitine racemase like protein | 2593 | putative phosphoribosylaminoimidazole carboxylase |
| 2565 | No function assigned by TIGR | 2594 | SAR DNA-binding protein - like |
| | | 2595 | response regulator, putative |
| | | 2596 | fibrillin precursor-like protein |
| | | 2597 | beta-ketoacyl-CoA synthase (FIDDLEHEAD) |
| | | 2598 | lectin like protein |
| | | 2599 | No function assigned by TIGR |

TABLE 1 (cont)

| | | | |
|------|---|------|---|
| 2600 | acidic endochitinase (dbj BAA21861.1) | 2629 | unknown protein |
| 2601 | unknown protein | 2630 | unknown protein |
| 2602 | hypothetical protein | 2631 | unknown protein |
| 2603 | predicted OR23 protein of unknown function | 2632 | nucleosome assembly protein I-like protein |
| 2604 | putative protein | 2633 | membrane channel like protein |
| 2605 | hypothetical protein | 2634 | anthocyanin2, putative |
| 2606 | glycerol-3-phosphate dehydrogenase | 2635 | TWIN SISTER OF FT (TSF) |
| 2607 | hypothetical protein | 2636 | putative myb-related transcription factor |
| 2608 | tat-binding protein, putative | 2637 | hypothetical protein |
| 2609 | putative protein | 2638 | putative RING zinc finger protein |
| 2610 | putative trehalose-6- phosphate phosphatase | 2639 | amino acid transport protein AAT1 |
| 2611 | hypothetical protein | 2640 | putative protein |
| 2612 | putative flavonol 3-O- glucosyltransferase | 2641 | putative protein |
| 2613 | 60S ribosomal protein L30 | 2642 | xanthine dehydrogenase |
| 2614 | putative auxin-induced protein | 2643 | xanthine dehydrogenase - like protein |
| 2615 | putative nonspecific lipid- transfer protein precursor | 2644 | receptor protein kinase (IRK1), putative |
| 2616 | AtRer1A | 2645 | dehydrin-like protein |
| 2617 | putative aquaporin (tonoplast intrinsic protein gamma) | 2646 | unknown protein |
| 2618 | hypothetical protein | 2647 | aldehyde dehydrogenase homolog, putative |
| 2619 | putative alanine acetyl transferase | 2648 | Ran binding protein (AtRanBP1b) |
| 2620 | putative NADP-dependent glyceraldehyde-3- phosphate dehydrogenase | 2649 | putative squamosa-promoter binding protein |
| 2621 | putative DNA binding protein | 2650 | putative protein |
| 2622 | putative cystathionine gamma-synthase | 2651 | kinesin like protein |
| 2623 | unknown protein | 2652 | putative cellulose synthase |
| 2624 | malate oxidoreductase (malic enzyme) | 2653 | calmodulin (cam2) |
| 2625 | unknown protein | 2654 | fibrillar - like protein |
| 2626 | cyclic nucleotide-gated cation channel | 2655 | putative transmembrane protein G5p |
| 2627 | glyoxalase II, putative | 2656 | putative peroxidase |
| 2628 | putative trypsin inhibitor | 2657 | putative SNF1-related protein kinase |
| | | 2658 | glutathione S-transferase, putative |
| | | 2659 | unknown protein |
| | | 2660 | hypothetical protein |
| | | 2661 | putative protein |
| | | 2662 | phosphatidylinositol-4-phosphate 5-kinase isolog |
| | | 2663 | putative tyrosine decarboxylase |
| | | 2664 | unknown protein |

TABLE 1 (cont)

| | | | |
|------|---|------|---|
| 2665 | SGP1 monomeric G-protein (emb CAB54517.1) | 2691 | putative pyrophosphate-dependent phosphofructokinase alpha subunit |
| 2666 | putative serine carboxypeptidase II | 2692 | putative flavonol glucosyltransferase |
| 2667 | putative L5 ribosomal protein | 2693 | peroxidase ATP20a (emb CAA67338.1) |
| 2668 | putative glucosyltransferase | 2694 | TOPP8 serine/threonine protein phosphatase type one |
| 2669 | flavonoid 3,5-hydroxylase like protein | 2695 | auxin regulated protein IAA18, putative |
| 2670 | putative protein | 2696 | putative WRKY-type DNA binding protein |
| 2671 | putative protein | 2697 | putative glucan synthase |
| 2672 | putative Fe(II)/ascorbate oxidase | 2698 | squalene monooxygenase |
| 2673 | putative anthocyanin 5- aromatic acyltransferase | 2699 | putative proline-rich protein |
| 2674 | casein kinase I | 2700 | G2484-1 protein |
| 2675 | putative 2,3- bisphosphoglycerate- independent phosphoglycerate mutase | 2701 | heat shock protein 70 like protein |
| 2676 | putative glutathione S- transferase TSI-1 | 2702 | unknown protein |
| 2677 | ATP-dependent RNA helicase | 2703 | unknown protein |
| 2678 | putative cytochrome P450 | | |
| 2679 | putative WD-40 repeat protein | | |
| 2680 | No function assigned by TIGR | | |
| 2681 | No function assigned by TIGR | | |
| 2682 | putative protein | | |
| 2683 | putative extensin | | |
| 2684 | nodulin-26 - like protein | | |
| 2685 | RNA helicase (emb CAA09212.1) | | |
| 2686 | predicted protein of unknown function | | |
| 2687 | putative berberine bridge enzyme | | |
| 2688 | thioredoxin, putative | | |
| 2689 | putative serine carboxypeptidase I | | |
| 2690 | cytochrome P450-like protein | | |

TABLE 2

ABIOTIC STRESS RESPONSIVE GENE REGULATORY SEQUENCES

| SEQ ID NO: | REGULATORY REGION | SEQ ID NO: | REGULATORY REGION | SEQ ID NO: | REGULATORY REGION |
|---------------|----------------------|---------------|----------------------|---------------|----------------------|
| 1 | 2704 | 51 | 2753 | 101 | 2802 |
| 2 | 2705 | 52 | 2754 | 102 | 2803 |
| 3 | 2706 | 53 | 2755 | 103 | 2804 |
| 4 | 2707 | 54 | 2756 | 104 | 2805 |
| 5 | 2708 | 55 | 2757 | 105 | 2806 |
| 6 | 2709 | 56 | 2758 | 106 | 2807 |
| 7 | 2710 | 57 | 2759 | 107 | 2808 |
| 8 | 2711 | 58 | 2760 | 108 | 2809 |
| 9 | 2712 | 59 | 2761 | 109 | 2810 |
| 10 | 2713 | 60 | 2762 | 110 | 2811 |
| 11 | 2714 | 61 | 2763 | 111 | 2812 |
| 12 | 2715 | 62 | 2764 | 112 | 2813 |
| 13 | 2716 | 63 | 2765 | 113 | 2814 |
| 14 | 2717 | 64 | 2766 | 114 | 2815 |
| 15 | 2718 | 65 | 2767 | 115 | 2816 |
| 16 | 2719 | 66 | 2768 | 116 | 2817 |
| 17 | 2720 | 67 | 2769 | 117 | 2818 |
| 18 | 2721 | 68 | 2770 | 118 | 2819 |
| 19 | 2722 | 69 | NONE | 119 | 2820 |
| 20 | 2723 | 70 | 2771 | 120 | 2821 |
| 21 | 2724 | 71 | 2772 | 121 | 2822 |
| 22 | 2725 | 72 | 2773 | 122 | 2823 |
| 23 | 2726 | 73 | 2774 | 123 | 2824 |
| 24 | 2727 | 74 | 2775 | 124 | 2825 |
| 25 | 2728 | 75 | 2776 | 125 | 2826 |
| 26 | 2729 | 76 | 2777 | 126 | 2827 |
| 27 | 2730 | 77 | 2778 | 127 | 2828 |
| 28 | 2731 | 78 | 2779 | 128 | 2829 |
| 29 | 2732 | 79 | 2780 | 129 | 2830 |
| 30 | 2733 | 80 | 2781 | 130 | 2831 |
| 31 | 2734 | 81 | 2782 | 131 | 2832 |
| 32 | 2735 | 82 | 2783 | 132 | 2833 |
| 33 | 2736 | 83 | 2784 | 133 | 2834 |
| 34 | 2737 | 84 | 2785 | 134 | 2835 |
| 35 | 2738 | 85 | 2786 | 135 | 2836 |
| 36 | 2739 | 86 | 2787 | 136 | 2837 |
| 37 | 2740 | 87 | 2788 | 137 | 2838 |
| 38 | 2741 | 88 | 2789 | 138 | 2839 |
| 39 | 2742 | 89 | 2790 | 139 | 2840 |
| 40 | 2743 | 90 | 2791 | 140 | 2841 |
| 41 | 2744 | 91 | 2792 | 141 | 2842 |
| 42 | 2745 | 92 | 2793 | 142 | 2843 |
| 43 | NONE | 93 | 2794 | 143 | 2844 |
| 44 | 2746 | 94 | 2795 | 144 | NONE |
| 45 | 2747 | 95 | 2796 | 145 | 2845 |
| 46 | 2748 | 96 | 2797 | 146 | 2846 |
| 47 | 2749 | 97 | 2798 | 147 | 2847 |
| 48 | 2750 | 98 | 2799 | 148 | 2848 |
| 49 | 2751 | 99 | 2800 | 149 | 2849 |
| 50 | 2752 | 100 | 2801 | 150 | 2850 |

TABLE 2 (cont)

| | | | | | |
|-----|------|-----|------|-----|------|
| 151 | 2851 | 205 | 2905 | 259 | 2959 |
| 152 | 2852 | 206 | 2906 | 260 | 2960 |
| 153 | 2853 | 207 | 2907 | 261 | 2961 |
| 154 | 2854 | 208 | 2908 | 262 | 2962 |
| 155 | 2855 | 209 | 2909 | 263 | 2963 |
| 156 | 2856 | 210 | 2910 | 264 | 2964 |
| 157 | 2857 | 211 | 2911 | 265 | 2965 |
| 158 | 2858 | 212 | 2912 | 266 | 2966 |
| 159 | 2859 | 213 | 2913 | 267 | 2967 |
| 160 | 2860 | 214 | 2914 | 268 | 2968 |
| 161 | 2861 | 215 | 2915 | 269 | 2969 |
| 162 | 2862 | 216 | 2916 | 270 | 2970 |
| 163 | 2863 | 217 | 2917 | 271 | 2971 |
| 164 | 2864 | 218 | 2918 | 272 | 2972 |
| 165 | 2865 | 219 | 2919 | 273 | 2973 |
| 166 | 2866 | 220 | 2920 | 274 | 2974 |
| 167 | 2867 | 221 | 2921 | 275 | 2975 |
| 168 | 2868 | 222 | 2922 | 276 | 2976 |
| 169 | 2869 | 223 | 2923 | 277 | 2977 |
| 170 | 2870 | 224 | 2924 | 278 | 2978 |
| 171 | 2871 | 225 | 2925 | 279 | 2979 |
| 172 | 2872 | 226 | 2926 | 280 | 2980 |
| 173 | 2873 | 227 | 2927 | 281 | 2981 |
| 174 | 2874 | 228 | 2928 | 282 | 2982 |
| 175 | 2875 | 229 | 2929 | 283 | 2983 |
| 176 | 2876 | 230 | 2930 | 284 | 2984 |
| 177 | 2877 | 231 | 2931 | 285 | 2985 |
| 178 | 2878 | 232 | 2932 | 286 | 2986 |
| 179 | 2879 | 233 | 2933 | 287 | 2987 |
| 180 | 2880 | 234 | 2934 | 288 | 2988 |
| 181 | 2881 | 235 | 2935 | 289 | 2989 |
| 182 | 2882 | 236 | 2936 | 290 | 2990 |
| 183 | 2883 | 237 | 2937 | 291 | 2991 |
| 184 | 2884 | 238 | 2938 | 292 | 2992 |
| 185 | 2885 | 239 | 2939 | 293 | 2993 |
| 186 | 2886 | 240 | 2940 | 294 | 2994 |
| 187 | 2887 | 241 | 2941 | 295 | 2995 |
| 188 | 2888 | 242 | 2942 | 296 | 2996 |
| 189 | 2889 | 243 | 2943 | 297 | 2997 |
| 190 | 2890 | 244 | 2944 | 298 | 2998 |
| 191 | 2891 | 245 | 2945 | 299 | 2999 |
| 192 | 2892 | 246 | 2946 | 300 | 3000 |
| 193 | 2893 | 247 | 2947 | 301 | 3001 |
| 194 | 2894 | 248 | 2948 | 302 | 3002 |
| 195 | 2895 | 249 | 2949 | 303 | 3003 |
| 196 | 2896 | 250 | 2950 | 304 | NONE |
| 197 | 2897 | 251 | 2951 | 305 | 3004 |
| 198 | 2898 | 252 | 2952 | 306 | 3005 |
| 199 | 2899 | 253 | 2953 | 307 | 3006 |
| 200 | 2900 | 254 | 2954 | 308 | 3007 |
| 201 | 2901 | 255 | 2955 | 309 | 3008 |
| 202 | 2902 | 256 | 2956 | 310 | 3009 |
| 203 | 2903 | 257 | 2957 | 311 | 3010 |
| 204 | 2904 | 258 | 2958 | 312 | 3011 |

TABLE 2 (cont)

| | | | | | |
|-----|------|-----|------|-----|------|
| 313 | 3012 | 367 | 3066 | 421 | 3120 |
| 314 | 3013 | 368 | 3067 | 422 | 3121 |
| 315 | 3014 | 369 | 3068 | 423 | 3122 |
| 316 | 3015 | 370 | 3069 | 424 | 3123 |
| 317 | 3016 | 371 | 3070 | 425 | 3124 |
| 318 | 3017 | 372 | 3071 | 426 | 3125 |
| 319 | 3018 | 373 | 3072 | 427 | 3126 |
| 320 | 3019 | 374 | 3073 | 428 | 3127 |
| 321 | 3020 | 375 | 3074 | 429 | 3128 |
| 322 | 3021 | 376 | 3075 | 430 | 3129 |
| 323 | 3022 | 377 | 3076 | 431 | 3130 |
| 324 | 3023 | 378 | 3077 | 432 | 3131 |
| 325 | 3024 | 379 | 3078 | 433 | 3132 |
| 326 | 3025 | 380 | 3079 | 434 | 3133 |
| 327 | 3026 | 381 | 3080 | 435 | 3134 |
| 328 | 3027 | 382 | 3081 | 436 | 3135 |
| 329 | 3028 | 383 | 3082 | 437 | 3136 |
| 330 | 3029 | 384 | 3083 | 438 | 3137 |
| 331 | 3030 | 385 | 3084 | 439 | 3138 |
| 332 | 3031 | 386 | 3085 | 440 | 3139 |
| 333 | 3032 | 387 | 3086 | 441 | 3140 |
| 334 | 3033 | 388 | 3087 | 442 | 3141 |
| 335 | 3034 | 389 | 3088 | 443 | 3142 |
| 336 | 3035 | 390 | 3089 | 444 | 3143 |
| 337 | 3036 | 391 | 3090 | 445 | 3144 |
| 338 | 3037 | 392 | 3091 | 446 | 3145 |
| 339 | 3038 | 393 | 3092 | 447 | 3146 |
| 340 | 3039 | 394 | 3093 | 448 | 3147 |
| 341 | 3040 | 395 | 3094 | 449 | 3148 |
| 342 | 3041 | 396 | 3095 | 450 | 3149 |
| 343 | 3042 | 397 | 3096 | 451 | 3150 |
| 344 | 3043 | 398 | 3097 | 452 | 3151 |
| 345 | 3044 | 399 | 3098 | 453 | 3152 |
| 346 | 3045 | 400 | 3099 | 454 | 3153 |
| 347 | 3046 | 401 | 3100 | 455 | 3154 |
| 348 | 3047 | 402 | 3101 | 456 | 3155 |
| 349 | 3048 | 403 | 3102 | 457 | 3156 |
| 350 | 3049 | 404 | 3103 | 458 | 3157 |
| 351 | 3050 | 405 | 3104 | 459 | 3158 |
| 352 | 3051 | 406 | 3105 | 460 | 3159 |
| 353 | 3052 | 407 | 3106 | 461 | 3160 |
| 354 | 3053 | 408 | 3107 | 462 | 3161 |
| 355 | 3054 | 409 | 3108 | 463 | 3162 |
| 356 | 3055 | 410 | 3109 | 464 | 3163 |
| 357 | 3056 | 411 | 3110 | 465 | 3164 |
| 358 | 3057 | 412 | 3111 | 466 | 3165 |
| 359 | 3058 | 413 | 3112 | 467 | 3166 |
| 360 | 3059 | 414 | 3113 | 468 | 3167 |
| 361 | 3060 | 415 | 3114 | 469 | 3168 |
| 362 | 3061 | 416 | 3115 | 470 | 3169 |
| 363 | 3062 | 417 | 3116 | 471 | 3170 |
| 364 | 3063 | 418 | 3117 | 472 | 3171 |
| 365 | 3064 | 419 | 3118 | 473 | 3172 |
| 366 | 3065 | 420 | 3119 | 474 | 3173 |

TABLE 2 (cont)

| | | | | | |
|-----|------|-----|------|-----|------|
| 475 | 3174 | 529 | 3228 | 583 | 3282 |
| 476 | 3175 | 530 | 3229 | 584 | 3283 |
| 477 | 3176 | 531 | 3230 | 585 | 3284 |
| 478 | 3177 | 532 | 3231 | 586 | 3285 |
| 479 | 3178 | 533 | 3232 | 587 | 3286 |
| 480 | 3179 | 534 | 3233 | 588 | 3287 |
| 481 | 3180 | 535 | 3234 | 589 | 3288 |
| 482 | 3181 | 536 | 3235 | 590 | 3289 |
| 483 | 3182 | 537 | 3236 | 591 | 3290 |
| 484 | 3183 | 538 | 3237 | 592 | 3291 |
| 485 | 3184 | 539 | 3238 | 593 | 3292 |
| 486 | 3185 | 540 | 3239 | 594 | 3293 |
| 487 | 3186 | 541 | 3240 | 595 | 3294 |
| 488 | 3187 | 542 | 3241 | 596 | 3295 |
| 489 | 3188 | 543 | 3242 | 597 | 3296 |
| 490 | 3189 | 544 | 3243 | 598 | 3297 |
| 491 | 3190 | 545 | 3244 | 599 | 3298 |
| 492 | 3191 | 546 | 3245 | 600 | 3299 |
| 493 | 3192 | 547 | 3246 | 601 | 3300 |
| 494 | 3193 | 548 | 3247 | 602 | 3301 |
| 495 | 3194 | 549 | 3248 | 603 | 3302 |
| 496 | 3195 | 550 | 3249 | 604 | 3303 |
| 497 | 3196 | 551 | 3250 | 605 | 3304 |
| 498 | 3197 | 552 | 3251 | 606 | 3305 |
| 499 | 3198 | 553 | 3252 | 607 | 3306 |
| 500 | 3199 | 554 | 3253 | 608 | 3307 |
| 501 | 3200 | 555 | 3254 | 609 | 3308 |
| 502 | 3201 | 556 | 3255 | 610 | 3309 |
| 503 | 3202 | 557 | 3256 | 611 | 3310 |
| 504 | 3203 | 558 | 3257 | 612 | 3311 |
| 505 | 3204 | 559 | 3258 | 613 | 3312 |
| 506 | 3205 | 560 | 3259 | 614 | 3313 |
| 507 | 3206 | 561 | 3260 | 615 | 3314 |
| 508 | 3207 | 562 | 3261 | 616 | 3315 |
| 509 | 3208 | 563 | 3262 | 617 | 3316 |
| 510 | 3209 | 564 | 3263 | 618 | 3317 |
| 511 | 3210 | 565 | 3264 | 619 | 3318 |
| 512 | 3211 | 566 | 3265 | 620 | 3319 |
| 513 | 3212 | 567 | 3266 | 621 | 3320 |
| 514 | 3213 | 568 | 3267 | 622 | 3321 |
| 515 | 3214 | 569 | 3268 | 623 | 3322 |
| 516 | 3215 | 570 | 3269 | 624 | 3323 |
| 517 | 3216 | 571 | 3270 | 625 | 3324 |
| 518 | 3217 | 572 | 3271 | 626 | 3325 |
| 519 | 3218 | 573 | 3272 | 627 | 3326 |
| 520 | 3219 | 574 | 3273 | 628 | 3327 |
| 521 | 3220 | 575 | 3274 | 629 | 3328 |
| 522 | 3221 | 576 | 3275 | 630 | 3329 |
| 523 | 3222 | 577 | 3276 | 631 | 3330 |
| 524 | 3223 | 578 | 3277 | 632 | 3331 |
| 525 | 3224 | 579 | 3278 | 633 | 3332 |
| 526 | 3225 | 580 | 3279 | 634 | 3333 |
| 527 | 3226 | 581 | 3280 | 635 | 3334 |
| 528 | 3227 | 582 | 3281 | 636 | 3335 |

TABLE 2 (cont)

| | | | | | |
|-----|------|-----|------|-----|------|
| 637 | 3336 | 691 | 3390 | 745 | 3444 |
| 638 | 3337 | 692 | 3391 | 746 | 3445 |
| 639 | 3338 | 693 | 3392 | 747 | 3446 |
| 640 | 3339 | 694 | 3393 | 748 | 3447 |
| 641 | 3340 | 695 | 3394 | 749 | 3448 |
| 642 | 3341 | 696 | 3395 | 750 | 3449 |
| 643 | 3342 | 697 | 3396 | 751 | 3450 |
| 644 | 3343 | 698 | 3397 | 752 | 3451 |
| 645 | 3344 | 699 | 3398 | 753 | 3452 |
| 646 | 3345 | 700 | 3399 | 754 | 3453 |
| 647 | 3346 | 701 | 3400 | 755 | 3454 |
| 648 | 3347 | 702 | 3401 | 756 | 3455 |
| 649 | 3348 | 703 | 3402 | 757 | 3456 |
| 650 | 3349 | 704 | 3403 | 758 | 3457 |
| 651 | 3350 | 705 | 3404 | 759 | 3458 |
| 652 | 3351 | 706 | 3405 | 760 | 3459 |
| 653 | 3352 | 707 | 3406 | 761 | 3460 |
| 654 | 3353 | 708 | 3407 | 762 | 3461 |
| 655 | 3354 | 709 | 3408 | 763 | 3462 |
| 656 | 3355 | 710 | 3409 | 764 | 3463 |
| 657 | 3356 | 711 | 3410 | 765 | 3464 |
| 658 | 3357 | 712 | 3411 | 766 | 3465 |
| 659 | 3358 | 713 | 3412 | 767 | 3466 |
| 660 | 3359 | 714 | 3413 | 768 | 3467 |
| 661 | 3360 | 715 | 3414 | 769 | 3468 |
| 662 | 3361 | 716 | 3415 | 770 | 3469 |
| 663 | 3362 | 717 | 3416 | 771 | 3470 |
| 664 | 3363 | 718 | 3417 | 772 | 3471 |
| 665 | 3364 | 719 | 3418 | 773 | 3472 |
| 666 | 3365 | 720 | 3419 | 774 | 3473 |
| 667 | 3366 | 721 | 3420 | 775 | 3474 |
| 668 | 3367 | 722 | 3421 | 776 | 3475 |
| 669 | 3368 | 723 | 3422 | 777 | 3476 |
| 670 | 3369 | 724 | 3423 | 778 | 3477 |
| 671 | 3370 | 725 | 3424 | 779 | 3478 |
| 672 | 3371 | 726 | 3425 | 780 | 3479 |
| 673 | 3372 | 727 | 3426 | 781 | 3480 |
| 674 | 3373 | 728 | 3427 | 782 | 3481 |
| 675 | 3374 | 729 | 3428 | 783 | 3482 |
| 676 | 3375 | 730 | 3429 | 784 | 3483 |
| 677 | 3376 | 731 | 3430 | 785 | 3484 |
| 678 | 3377 | 732 | 3431 | 786 | 3485 |
| 679 | 3378 | 733 | 3432 | 787 | 3486 |
| 680 | 3379 | 734 | 3433 | 788 | 3487 |
| 681 | 3380 | 735 | 3434 | 789 | 3488 |
| 682 | 3381 | 736 | 3435 | 790 | 3489 |
| 683 | 3382 | 737 | 3436 | 791 | 3490 |
| 684 | 3383 | 738 | 3437 | 792 | 3491 |
| 685 | 3384 | 739 | 3438 | 793 | 3492 |
| 686 | 3385 | 740 | 3439 | 794 | 3493 |
| 687 | 3386 | 741 | 3440 | 795 | 3494 |
| 688 | 3387 | 742 | 3441 | 796 | 3495 |
| 689 | 3388 | 743 | 3442 | 797 | 3496 |
| 690 | 3389 | 744 | 3443 | 798 | 3497 |

TABLE 2 (cont)

| | | | | | |
|-----|------|-----|------|-----|------|
| 799 | 3498 | 853 | 3552 | 907 | 3603 |
| 800 | 3499 | 854 | 3553 | 908 | 3604 |
| 801 | 3500 | 855 | 3554 | 909 | 3605 |
| 802 | 3501 | 856 | 3555 | 910 | 3606 |
| 803 | 3502 | 857 | 3556 | 911 | 3607 |
| 804 | 3503 | 858 | 3557 | 912 | 3608 |
| 805 | 3504 | 859 | 3558 | 913 | 3609 |
| 806 | 3505 | 860 | 3559 | 914 | 3610 |
| 807 | 3506 | 861 | 3560 | 915 | 3611 |
| 808 | 3507 | 862 | 3561 | 916 | 3612 |
| 809 | 3508 | 863 | 3562 | 917 | 3613 |
| 810 | 3509 | 864 | 3563 | 918 | 3614 |
| 811 | 3510 | 865 | 3564 | 919 | 3615 |
| 812 | 3511 | 866 | 3565 | 920 | 3616 |
| 813 | 3512 | 867 | 3566 | 921 | 3617 |
| 814 | 3513 | 868 | 3567 | 922 | 3618 |
| 815 | 3514 | 869 | 3568 | 923 | 3619 |
| 816 | 3515 | 870 | 3569 | 924 | 3620 |
| 817 | 3516 | 871 | 3570 | 925 | 3621 |
| 818 | 3517 | 872 | 3571 | 926 | 3622 |
| 819 | 3518 | 873 | 3572 | 927 | 3623 |
| 820 | 3519 | 874 | 3573 | 928 | 3624 |
| 821 | 3520 | 875 | 3574 | 929 | 3625 |
| 822 | 3521 | 876 | 3575 | 930 | 3626 |
| 823 | 3522 | 877 | 3576 | 931 | 3627 |
| 824 | 3523 | 878 | 3577 | 932 | 3628 |
| 825 | 3524 | 879 | 3578 | 933 | 3629 |
| 826 | 3525 | 880 | 3579 | 934 | 3630 |
| 827 | 3526 | 881 | 3580 | 935 | NONE |
| 828 | 3527 | 882 | 3581 | 936 | 3631 |
| 829 | 3528 | 883 | 3582 | 937 | 3632 |
| 830 | 3529 | 884 | 3583 | 938 | 3633 |
| 831 | 3530 | 885 | 3584 | 939 | 3634 |
| 832 | 3531 | 886 | 3585 | 940 | 3635 |
| 833 | 3532 | 887 | NONE | 941 | 3636 |
| 834 | 3533 | 888 | 3586 | 942 | 3637 |
| 835 | 3534 | 889 | 3587 | 943 | 3638 |
| 836 | 3535 | 890 | 3588 | 944 | 3639 |
| 837 | 3536 | 891 | 3589 | 945 | 3640 |
| 838 | 3537 | 892 | 3590 | 946 | 3641 |
| 839 | 3538 | 893 | 3591 | 947 | 3642 |
| 840 | 3539 | 894 | NONE | 948 | 3643 |
| 841 | 3540 | 895 | NONE | 949 | 3644 |
| 842 | 3541 | 896 | 3592 | 950 | 3645 |
| 843 | 3542 | 897 | 3593 | 951 | 3646 |
| 844 | 3543 | 898 | 3594 | 952 | 3647 |
| 845 | 3544 | 899 | 3595 | 953 | 3648 |
| 846 | 3545 | 900 | 3596 | 954 | 3649 |
| 847 | 3546 | 901 | 3597 | 955 | 3650 |
| 848 | 3547 | 902 | 3598 | 956 | 3651 |
| 849 | 3548 | 903 | 3599 | 957 | 3652 |
| 850 | 3549 | 904 | 3600 | 958 | 3653 |
| 851 | 3550 | 905 | 3601 | 959 | 3654 |
| 852 | 3551 | 906 | 3602 | 960 | 3655 |

TABLE 2 (cont)

| | | | | | |
|------|------|------|------|------|------|
| 961 | 3656 | 1015 | 3710 | 1069 | 3764 |
| 962 | 3657 | 1016 | 3711 | 1070 | 3765 |
| 963 | 3658 | 1017 | 3712 | 1071 | 3766 |
| 964 | 3659 | 1018 | 3713 | 1072 | 3767 |
| 965 | 3660 | 1019 | 3714 | 1073 | 3768 |
| 966 | 3661 | 1020 | 3715 | 1074 | 3769 |
| 967 | 3662 | 1021 | 3716 | 1075 | 3770 |
| 968 | 3663 | 1022 | 3717 | 1076 | 3771 |
| 969 | 3664 | 1023 | 3718 | 1077 | 3772 |
| 970 | 3665 | 1024 | 3719 | 1078 | 3773 |
| 971 | 3666 | 1025 | 3720 | 1079 | 3774 |
| 972 | 3667 | 1026 | 3721 | 1080 | 3775 |
| 973 | 3668 | 1027 | 3722 | 1081 | 3776 |
| 974 | 3669 | 1028 | 3723 | 1082 | 3777 |
| 975 | 3670 | 1029 | 3724 | 1083 | 3778 |
| 976 | 3671 | 1030 | 3725 | 1084 | 3779 |
| 977 | 3672 | 1031 | 3726 | 1085 | 3780 |
| 978 | 3673 | 1032 | 3727 | 1086 | 3781 |
| 979 | 3674 | 1033 | 3728 | 1087 | NONE |
| 980 | 3675 | 1034 | 3729 | 1088 | 3782 |
| 981 | 3676 | 1035 | 3730 | 1089 | 3783 |
| 982 | 3677 | 1036 | 3731 | 1090 | 3784 |
| 983 | 3678 | 1037 | 3732 | 1091 | 3785 |
| 984 | 3679 | 1038 | 3733 | 1092 | 3786 |
| 985 | 3680 | 1039 | 3734 | 1093 | 3787 |
| 986 | 3681 | 1040 | 3735 | 1094 | 3788 |
| 987 | 3682 | 1041 | 3736 | 1095 | 3789 |
| 988 | 3683 | 1042 | 3737 | 1096 | 3790 |
| 989 | 3684 | 1043 | 3738 | 1097 | 3791 |
| 990 | 3685 | 1044 | 3739 | 1098 | 3792 |
| 991 | 3686 | 1045 | 3740 | 1099 | 3793 |
| 992 | 3687 | 1046 | 3741 | 1100 | 3794 |
| 993 | 3688 | 1047 | 3742 | 1101 | 3795 |
| 994 | 3689 | 1048 | 3743 | 1102 | 3796 |
| 995 | 3690 | 1049 | 3744 | 1103 | 3797 |
| 996 | 3691 | 1050 | 3745 | 1104 | 3798 |
| 997 | 3692 | 1051 | 3746 | 1105 | 3799 |
| 998 | 3693 | 1052 | 3747 | 1106 | 3800 |
| 999 | 3694 | 1053 | 3748 | 1107 | 3801 |
| 1000 | 3695 | 1054 | 3749 | 1108 | 3802 |
| 1001 | 3696 | 1055 | 3750 | 1109 | 3803 |
| 1002 | 3697 | 1056 | 3751 | 1110 | 3804 |
| 1003 | 3698 | 1057 | 3752 | 1111 | 3805 |
| 1004 | 3699 | 1058 | 3753 | 1112 | 3806 |
| 1005 | 3700 | 1059 | 3754 | 1113 | 3807 |
| 1006 | 3701 | 1060 | 3755 | 1114 | 3808 |
| 1007 | 3702 | 1061 | 3756 | 1115 | 3809 |
| 1008 | 3703 | 1062 | 3757 | 1116 | 3810 |
| 1009 | 3704 | 1063 | 3758 | 1117 | 3811 |
| 1010 | 3705 | 1064 | 3759 | 1118 | 3812 |
| 1011 | 3706 | 1065 | 3760 | 1119 | 3813 |
| 1012 | 3707 | 1066 | 3761 | 1120 | 3814 |
| 1013 | 3708 | 1067 | 3762 | 1121 | 3815 |
| 1014 | 3709 | 1068 | 3763 | 1122 | 3816 |

TABLE 2 (cont)

| | | | | | |
|------|------|------|------|------|------|
| 1123 | 3817 | 1177 | 3871 | 1231 | 3925 |
| 1124 | 3818 | 1178 | 3872 | 1232 | 3926 |
| 1125 | 3819 | 1179 | 3873 | 1233 | 3927 |
| 1126 | 3820 | 1180 | 3874 | 1234 | 3928 |
| 1127 | 3821 | 1181 | 3875 | 1235 | 3929 |
| 1128 | 3822 | 1182 | 3876 | 1236 | 3930 |
| 1129 | 3823 | 1183 | 3877 | 1237 | 3931 |
| 1130 | 3824 | 1184 | 3878 | 1238 | 3932 |
| 1131 | 3825 | 1185 | 3879 | 1239 | 3933 |
| 1132 | 3826 | 1186 | 3880 | 1240 | 3934 |
| 1133 | 3827 | 1187 | 3881 | 1241 | 3935 |
| 1134 | 3828 | 1188 | 3882 | 1242 | 3936 |
| 1135 | 3829 | 1189 | 3883 | 1243 | 3937 |
| 1136 | 3830 | 1190 | 3884 | 1244 | 3938 |
| 1137 | 3831 | 1191 | 3885 | 1245 | 3939 |
| 1138 | 3832 | 1192 | 3886 | 1246 | 3940 |
| 1139 | 3833 | 1193 | 3887 | 1247 | 3941 |
| 1140 | 3834 | 1194 | 3888 | 1248 | 3942 |
| 1141 | 3835 | 1195 | 3889 | 1249 | 3943 |
| 1142 | 3836 | 1196 | 3890 | 1250 | 3944 |
| 1143 | 3837 | 1197 | 3891 | 1251 | 3945 |
| 1144 | 3838 | 1198 | 3892 | 1252 | 3946 |
| 1145 | 3839 | 1199 | 3893 | 1253 | 3947 |
| 1146 | 3840 | 1200 | 3894 | 1254 | 3948 |
| 1147 | 3841 | 1201 | 3895 | 1255 | 3949 |
| 1148 | 3842 | 1202 | 3896 | 1256 | 3950 |
| 1149 | 3843 | 1203 | 3897 | 1257 | 3951 |
| 1150 | 3844 | 1204 | 3898 | 1258 | 3952 |
| 1151 | 3845 | 1205 | 3899 | 1259 | 3953 |
| 1152 | 3846 | 1206 | 3900 | 1260 | 3954 |
| 1153 | 3847 | 1207 | 3901 | 1261 | 3955 |
| 1154 | 3848 | 1208 | 3902 | 1262 | 3956 |
| 1155 | 3849 | 1209 | 3903 | 1263 | 3957 |
| 1156 | 3850 | 1210 | 3904 | 1264 | 3958 |
| 1157 | 3851 | 1211 | 3905 | 1265 | 3959 |
| 1158 | 3852 | 1212 | 3906 | 1266 | 3960 |
| 1159 | 3853 | 1213 | 3907 | 1267 | 3961 |
| 1160 | 3854 | 1214 | 3908 | 1268 | 3962 |
| 1161 | 3855 | 1215 | 3909 | 1269 | 3963 |
| 1162 | 3856 | 1216 | 3910 | 1270 | 3964 |
| 1163 | 3857 | 1217 | 3911 | 1271 | 3965 |
| 1164 | 3858 | 1218 | 3912 | 1272 | 3966 |
| 1165 | 3859 | 1219 | 3913 | 1273 | 3967 |
| 1166 | 3860 | 1220 | 3914 | 1274 | 3968 |
| 1167 | 3861 | 1221 | 3915 | 1275 | 3969 |
| 1168 | 3862 | 1222 | 3916 | 1276 | 3970 |
| 1169 | 3863 | 1223 | 3917 | 1277 | 3971 |
| 1170 | 3864 | 1224 | 3918 | 1278 | 3972 |
| 1171 | 3865 | 1225 | 3919 | 1279 | 3973 |
| 1172 | 3866 | 1226 | 3920 | 1280 | 3974 |
| 1173 | 3867 | 1227 | 3921 | 1281 | 3975 |
| 1174 | 3868 | 1228 | 3922 | 1282 | 3976 |
| 1175 | 3869 | 1229 | 3923 | 1283 | 3977 |
| 1176 | 3870 | 1230 | 3924 | 1284 | 3978 |

TABLE 2 (cont)

| | | | | | |
|------|------|------|------|------|------|
| 1285 | 3979 | 1339 | 4032 | 1393 | 4086 |
| 1286 | 3980 | 1340 | 4033 | 1394 | 4087 |
| 1287 | 3981 | 1341 | 4034 | 1395 | 4088 |
| 1288 | 3982 | 1342 | 4035 | 1396 | 4089 |
| 1289 | 3983 | 1343 | 4036 | 1397 | 4090 |
| 1290 | 3984 | 1344 | 4037 | 1398 | 4091 |
| 1291 | 3985 | 1345 | 4038 | 1399 | 4092 |
| 1292 | 3986 | 1346 | 4039 | 1400 | 4093 |
| 1293 | 3987 | 1347 | 4040 | 1401 | 4094 |
| 1294 | 3988 | 1348 | 4041 | 1402 | 4095 |
| 1295 | 3989 | 1349 | 4042 | 1403 | 4096 |
| 1296 | 3990 | 1350 | 4043 | 1404 | 4097 |
| 1297 | 3991 | 1351 | 4044 | 1405 | 4098 |
| 1298 | 3992 | 1352 | 4045 | 1406 | 4099 |
| 1299 | 3993 | 1353 | 4046 | 1407 | 4100 |
| 1300 | 3994 | 1354 | 4047 | 1408 | 4101 |
| 1301 | 3995 | 1355 | 4048 | 1409 | 4102 |
| 1302 | 3996 | 1356 | 4049 | 1410 | 4103 |
| 1303 | 3997 | 1357 | 4050 | 1411 | 4104 |
| 1304 | 3998 | 1358 | 4051 | 1412 | 4105 |
| 1305 | 3999 | 1359 | 4052 | 1413 | 4106 |
| 1306 | 4000 | 1360 | 4053 | 1414 | 4107 |
| 1307 | 4001 | 1361 | 4054 | 1415 | 4108 |
| 1308 | 4002 | 1362 | 4055 | 1416 | 4109 |
| 1309 | 4003 | 1363 | 4056 | 1417 | 4110 |
| 1310 | 4004 | 1364 | 4057 | 1418 | 4111 |
| 1311 | 4005 | 1365 | 4058 | 1419 | 4112 |
| 1312 | 4006 | 1366 | 4059 | 1420 | 4113 |
| 1313 | 4007 | 1367 | 4060 | 1421 | 4114 |
| 1314 | 4008 | 1368 | 4061 | 1422 | 4115 |
| 1315 | 4009 | 1369 | 4062 | 1423 | 4116 |
| 1316 | 4010 | 1370 | 4063 | 1424 | 4117 |
| 1317 | 4011 | 1371 | 4064 | 1425 | 4118 |
| 1318 | 4012 | 1372 | 4065 | 1426 | 4119 |
| 1319 | 4013 | 1373 | 4066 | 1427 | 4120 |
| 1320 | 4014 | 1374 | 4067 | 1428 | 4121 |
| 1321 | 4015 | 1375 | 4068 | 1429 | 4122 |
| 1322 | 4016 | 1376 | 4069 | 1430 | 4123 |
| 1323 | 4017 | 1377 | 4070 | 1431 | 4124 |
| 1324 | 4018 | 1378 | 4071 | 1432 | NONE |
| 1325 | 4019 | 1379 | 4072 | 1433 | 4125 |
| 1326 | 4020 | 1380 | 4073 | 1434 | 4126 |
| 1327 | 4021 | 1381 | 4074 | 1435 | 4127 |
| 1328 | 4022 | 1382 | 4075 | 1436 | 4128 |
| 1329 | 4023 | 1383 | 4076 | 1437 | 4129 |
| 1330 | NONE | 1384 | 4077 | 1438 | 4130 |
| 1331 | 4024 | 1385 | 4078 | 1439 | 4131 |
| 1332 | 4025 | 1386 | 4079 | 1440 | 4132 |
| 1333 | 4026 | 1387 | 4080 | 1441 | 4133 |
| 1334 | 4027 | 1388 | 4081 | 1442 | 4134 |
| 1335 | 4028 | 1389 | 4082 | 1443 | 4135 |
| 1336 | 4029 | 1390 | 4083 | 1444 | 4136 |
| 1337 | 4030 | 1391 | 4084 | 1445 | 4137 |
| 1338 | 4031 | 1392 | 4085 | 1446 | 4138 |

TABLE 2 (cont)

| | | | | | |
|------|------|------|------|------|------|
| 1447 | 4139 | 1501 | 4193 | 1555 | 4247 |
| 1448 | 4140 | 1502 | 4194 | 1556 | 4248 |
| 1449 | 4141 | 1503 | 4195 | 1557 | 4249 |
| 1450 | 4142 | 1504 | 4196 | 1558 | NONE |
| 1451 | 4143 | 1505 | 4197 | 1559 | 4250 |
| 1452 | 4144 | 1506 | 4198 | 1560 | 4251 |
| 1453 | 4145 | 1507 | 4199 | 1561 | 4252 |
| 1454 | 4146 | 1508 | 4200 | 1562 | 4253 |
| 1455 | 4147 | 1509 | 4201 | 1563 | 4254 |
| 1456 | 4148 | 1510 | 4202 | 1564 | 4255 |
| 1457 | 4149 | 1511 | 4203 | 1565 | 4256 |
| 1458 | 4150 | 1512 | 4204 | 1566 | 4257 |
| 1459 | 4151 | 1513 | 4205 | 1567 | 4258 |
| 1460 | 4152 | 1514 | 4206 | 1568 | 4259 |
| 1461 | 4153 | 1515 | 4207 | 1569 | 4260 |
| 1462 | 4154 | 1516 | 4208 | 1570 | 4261 |
| 1463 | 4155 | 1517 | 4209 | 1571 | 4262 |
| 1464 | 4156 | 1518 | 4210 | 1572 | 4263 |
| 1465 | 4157 | 1519 | 4211 | 1573 | 4264 |
| 1466 | 4158 | 1520 | 4212 | 1574 | 4265 |
| 1467 | 4159 | 1521 | 4213 | 1575 | 4266 |
| 1468 | 4160 | 1522 | 4214 | 1576 | 4267 |
| 1469 | 4161 | 1523 | 4215 | 1577 | 4268 |
| 1470 | 4162 | 1524 | 4216 | 1578 | 4269 |
| 1471 | 4163 | 1525 | 4217 | 1579 | 4270 |
| 1472 | 4164 | 1526 | 4218 | 1580 | 4271 |
| 1473 | 4165 | 1527 | 4219 | 1581 | 4272 |
| 1474 | 4166 | 1528 | 4220 | 1582 | 4273 |
| 1475 | 4167 | 1529 | 4221 | 1583 | 4274 |
| 1476 | 4168 | 1530 | 4222 | 1584 | 4275 |
| 1477 | 4169 | 1531 | 4223 | 1585 | 4276 |
| 1478 | 4170 | 1532 | 4224 | 1586 | 4277 |
| 1479 | 4171 | 1533 | 4225 | 1587 | 4278 |
| 1480 | 4172 | 1534 | 4226 | 1588 | 4279 |
| 1481 | 4173 | 1535 | 4227 | 1589 | 4280 |
| 1482 | 4174 | 1536 | 4228 | 1590 | 4281 |
| 1483 | 4175 | 1537 | 4229 | 1591 | 4282 |
| 1484 | 4176 | 1538 | 4230 | 1592 | 4283 |
| 1485 | 4177 | 1539 | 4231 | 1593 | 4284 |
| 1486 | 4178 | 1540 | 4232 | 1594 | 4285 |
| 1487 | 4179 | 1541 | 4233 | 1595 | 4286 |
| 1488 | 4180 | 1542 | 4234 | 1596 | 4287 |
| 1489 | 4181 | 1543 | 4235 | 1597 | 4288 |
| 1490 | 4182 | 1544 | 4236 | 1598 | 4289 |
| 1491 | 4183 | 1545 | 4237 | 1599 | 4290 |
| 1492 | 4184 | 1546 | 4238 | 1600 | 4291 |
| 1493 | 4185 | 1547 | 4239 | 1601 | 4292 |
| 1494 | 4186 | 1548 | 4240 | 1602 | 4293 |
| 1495 | 4187 | 1549 | 4241 | 1603 | 4294 |
| 1496 | 4188 | 1550 | 4242 | 1604 | 4295 |
| 1497 | 4189 | 1551 | 4243 | 1605 | 4296 |
| 1498 | 4190 | 1552 | 4244 | 1606 | 4297 |
| 1499 | 4191 | 1553 | 4245 | 1607 | 4298 |
| 1500 | 4192 | 1554 | 4246 | 1608 | 4299 |

TABLE 2 (cont)

| | | | | | |
|------|------|------|------|------|------|
| 1609 | 4300 | 1663 | NONE | 1717 | 4406 |
| 1610 | 4301 | 1664 | 4354 | 1718 | 4407 |
| 1611 | 4302 | 1665 | 4355 | 1719 | 4408 |
| 1612 | 4303 | 1666 | 4356 | 1720 | 4409 |
| 1613 | 4304 | 1667 | 4357 | 1721 | 4410 |
| 1614 | 4305 | 1668 | 4358 | 1722 | 4411 |
| 1615 | 4306 | 1669 | 4359 | 1723 | 4412 |
| 1616 | 4307 | 1670 | 4360 | 1724 | 4413 |
| 1617 | 4308 | 1671 | 4361 | 1725 | 4414 |
| 1618 | 4309 | 1672 | 4362 | 1726 | 4415 |
| 1619 | 4310 | 1673 | 4363 | 1727 | 4416 |
| 1620 | 4311 | 1674 | 4364 | 1728 | 4417 |
| 1621 | 4312 | 1675 | 4365 | 1729 | 4418 |
| 1622 | 4313 | 1676 | 4366 | 1730 | 4419 |
| 1623 | 4314 | 1677 | 4367 | 1731 | 4420 |
| 1624 | 4315 | 1678 | 4368 | 1732 | 4421 |
| 1625 | 4316 | 1679 | 4369 | 1733 | 4422 |
| 1626 | 4317 | 1680 | 4370 | 1734 | 4423 |
| 1627 | 4318 | 1681 | 4371 | 1735 | 4424 |
| 1628 | 4319 | 1682 | 4372 | 1736 | 4425 |
| 1629 | 4320 | 1683 | 4373 | 1737 | 4426 |
| 1630 | 4321 | 1684 | 4374 | 1738 | 4427 |
| 1631 | 4322 | 1685 | 4375 | 1739 | 4428 |
| 1632 | 4323 | 1686 | 4376 | 1740 | 4429 |
| 1633 | 4324 | 1687 | 4377 | 1741 | 4430 |
| 1634 | 4325 | 1688 | 4378 | 1742 | 4431 |
| 1635 | 4326 | 1689 | 4379 | 1743 | 4432 |
| 1636 | 4327 | 1690 | 4380 | 1744 | 4433 |
| 1637 | 4328 | 1691 | 4381 | 1745 | 4434 |
| 1638 | 4329 | 1692 | 4382 | 1746 | 4435 |
| 1639 | 4330 | 1693 | 4383 | 1747 | 4436 |
| 1640 | 4331 | 1694 | 4384 | 1748 | 4437 |
| 1641 | 4332 | 1695 | 4385 | 1749 | 4438 |
| 1642 | 4333 | 1696 | 4386 | 1750 | 4439 |
| 1643 | 4334 | 1697 | 4387 | 1751 | 4440 |
| 1644 | 4335 | 1698 | 4388 | 1752 | 4441 |
| 1645 | 4336 | 1699 | 4389 | 1753 | 4442 |
| 1646 | 4337 | 1700 | 4390 | 1754 | 4443 |
| 1647 | 4338 | 1701 | 4391 | 1755 | 4444 |
| 1648 | 4339 | 1702 | 4392 | 1756 | 4445 |
| 1649 | 4340 | 1703 | 4393 | 1757 | 4446 |
| 1650 | 4341 | 1704 | 4394 | 1758 | 4447 |
| 1651 | 4342 | 1705 | 4395 | 1759 | 4448 |
| 1652 | 4343 | 1706 | 4396 | 1760 | 4449 |
| 1653 | 4344 | 1707 | 4397 | 1761 | 4450 |
| 1654 | 4345 | 1708 | 4398 | 1762 | 4451 |
| 1655 | 4346 | 1709 | 4399 | 1763 | 4452 |
| 1656 | 4347 | 1710 | 4400 | 1764 | 4453 |
| 1657 | 4348 | 1711 | 4401 | 1765 | 4454 |
| 1658 | 4349 | 1712 | NONE | 1766 | 4455 |
| 1659 | 4350 | 1713 | 4402 | 1767 | 4456 |
| 1660 | 4351 | 1714 | 4403 | 1768 | 4457 |
| 1661 | 4352 | 1715 | 4404 | 1769 | 4458 |
| 1662 | 4353 | 1716 | 4405 | 1770 | 4459 |

TABLE 2 (cont)

| | | | | | |
|------|------|------|------|------|------|
| 1771 | 4460 | 1825 | 4512 | 1879 | 4566 |
| 1772 | 4461 | 1826 | 4513 | 1880 | 4567 |
| 1773 | 4462 | 1827 | 4514 | 1881 | 4568 |
| 1774 | 4463 | 1828 | 4515 | 1882 | 4569 |
| 1775 | 4464 | 1829 | 4516 | 1883 | 4570 |
| 1776 | 4465 | 1830 | 4517 | 1884 | 4571 |
| 1777 | 4466 | 1831 | 4518 | 1885 | 4572 |
| 1778 | 4467 | 1832 | 4519 | 1886 | 4573 |
| 1779 | 4468 | 1833 | 4520 | 1887 | 4574 |
| 1780 | 4469 | 1834 | 4521 | 1888 | 4575 |
| 1781 | 4470 | 1835 | 4522 | 1889 | 4576 |
| 1782 | 4471 | 1836 | 4523 | 1890 | 4577 |
| 1783 | 4472 | 1837 | 4524 | 1891 | 4578 |
| 1784 | NONE | 1838 | 4525 | 1892 | 4579 |
| 1785 | 4473 | 1839 | 4526 | 1893 | 4580 |
| 1786 | 4474 | 1840 | 4527 | 1894 | 4581 |
| 1787 | 4475 | 1841 | 4528 | 1895 | 4582 |
| 1788 | 4476 | 1842 | 4529 | 1896 | 4583 |
| 1789 | 4477 | 1843 | 4530 | 1897 | NONE |
| 1790 | 4478 | 1844 | 4531 | 1898 | 4584 |
| 1791 | 4479 | 1845 | 4532 | 1899 | 4585 |
| 1792 | 4480 | 1846 | 4533 | 1900 | 4586 |
| 1793 | 4481 | 1847 | 4534 | 1901 | 4587 |
| 1794 | 4482 | 1848 | 4535 | 1902 | 4588 |
| 1795 | 4483 | 1849 | 4536 | 1903 | 4589 |
| 1796 | 4484 | 1850 | 4537 | 1904 | 4590 |
| 1797 | 4485 | 1851 | 4538 | 1905 | 4591 |
| 1798 | 4486 | 1852 | 4539 | 1906 | 4592 |
| 1799 | 4487 | 1853 | 4540 | 1907 | NONE |
| 1800 | 4488 | 1854 | 4541 | 1908 | 4593 |
| 1801 | 4489 | 1855 | 4542 | 1909 | 4594 |
| 1802 | 4490 | 1856 | 4543 | 1910 | 4595 |
| 1803 | NONE | 1857 | 4544 | 1911 | 4596 |
| 1804 | 4491 | 1858 | 4545 | 1912 | 4597 |
| 1805 | 4492 | 1859 | 4546 | 1913 | 4598 |
| 1806 | 4493 | 1860 | 4547 | 1914 | 4599 |
| 1807 | 4494 | 1861 | 4548 | 1915 | 4600 |
| 1808 | 4495 | 1862 | 4549 | 1916 | 4601 |
| 1809 | 4496 | 1863 | 4550 | 1917 | 4602 |
| 1810 | 4497 | 1864 | 4551 | 1918 | 4603 |
| 1811 | 4498 | 1865 | 4552 | 1919 | 4604 |
| 1812 | 4499 | 1866 | 4553 | 1920 | 4605 |
| 1813 | 4500 | 1867 | 4554 | 1921 | 4606 |
| 1814 | 4501 | 1868 | 4555 | 1922 | 4607 |
| 1815 | 4502 | 1869 | 4556 | 1923 | 4608 |
| 1816 | 4503 | 1870 | 4557 | 1924 | 4609 |
| 1817 | 4504 | 1871 | 4558 | 1925 | 4610 |
| 1818 | 4505 | 1872 | 4559 | 1926 | 4611 |
| 1819 | 4506 | 1873 | 4560 | 1927 | 4612 |
| 1820 | 4507 | 1874 | 4561 | 1928 | 4613 |
| 1821 | 4508 | 1875 | 4562 | 1929 | 4614 |
| 1822 | 4509 | 1876 | 4563 | 1930 | 4615 |
| 1823 | 4510 | 1877 | 4564 | 1931 | 4616 |
| 1824 | 4511 | 1878 | 4565 | 1932 | 4617 |

TABLE 2 (cont)

| | | | | | |
|------|------|------|------|------|------|
| 1933 | 4618 | 1987 | 4672 | 2041 | 4725 |
| 1934 | 4619 | 1988 | 4673 | 2042 | 4726 |
| 1935 | 4620 | 1989 | 4674 | 2043 | 4727 |
| 1936 | 4621 | 1990 | 4675 | 2044 | 4728 |
| 1937 | 4622 | 1991 | 4676 | 2045 | 4729 |
| 1938 | 4623 | 1992 | 4677 | 2046 | 4730 |
| 1939 | 4624 | 1993 | 4678 | 2047 | 4731 |
| 1940 | 4625 | 1994 | 4679 | 2048 | 4732 |
| 1941 | 4626 | 1995 | 4680 | 2049 | 4733 |
| 1942 | 4627 | 1996 | 4681 | 2050 | 4734 |
| 1943 | 4628 | 1997 | 4682 | 2051 | 4735 |
| 1944 | 4629 | 1998 | 4683 | 2052 | 4736 |
| 1945 | 4630 | 1999 | 4684 | 2053 | 4737 |
| 1946 | 4631 | 2000 | 4685 | 2054 | 4738 |
| 1947 | 4632 | 2001 | 4686 | 2055 | 4739 |
| 1948 | 4633 | 2002 | 4687 | 2056 | 4740 |
| 1949 | 4634 | 2003 | 4688 | 2057 | 4741 |
| 1950 | 4635 | 2004 | 4689 | 2058 | 4742 |
| 1951 | 4636 | 2005 | 4690 | 2059 | 4743 |
| 1952 | 4637 | 2006 | 4691 | 2060 | 4744 |
| 1953 | 4638 | 2007 | 4692 | 2061 | 4745 |
| 1954 | 4639 | 2008 | 4693 | 2062 | 4746 |
| 1955 | 4640 | 2009 | 4694 | 2063 | 4747 |
| 1956 | 4641 | 2010 | 4695 | 2064 | 4748 |
| 1957 | 4642 | 2011 | 4696 | 2065 | 4749 |
| 1958 | 4643 | 2012 | 4697 | 2066 | 4750 |
| 1959 | 4644 | 2013 | 4698 | 2067 | 4751 |
| 1960 | 4645 | 2014 | 4699 | 2068 | 4752 |
| 1961 | 4646 | 2015 | 4700 | 2069 | 4753 |
| 1962 | 4647 | 2016 | 4701 | 2070 | 4754 |
| 1963 | 4648 | 2017 | 4702 | 2071 | 4755 |
| 1964 | 4649 | 2018 | 4703 | 2072 | 4756 |
| 1965 | 4650 | 2019 | 4704 | 2073 | 4757 |
| 1966 | 4651 | 2020 | 4705 | 2074 | 4758 |
| 1967 | 4652 | 2021 | 4706 | 2075 | 4759 |
| 1968 | 4653 | 2022 | 4707 | 2076 | 4760 |
| 1969 | 4654 | 2023 | 4708 | 2077 | 4761 |
| 1970 | 4655 | 2024 | 4709 | 2078 | 4762 |
| 1971 | 4656 | 2025 | 4710 | 2079 | 4763 |
| 1972 | 4657 | 2026 | 4711 | 2080 | 4764 |
| 1973 | 4658 | 2027 | 4712 | 2081 | 4765 |
| 1974 | 4659 | 2028 | 4713 | 2082 | 4766 |
| 1975 | 4660 | 2029 | 4714 | 2083 | 4767 |
| 1976 | 4661 | 2030 | NONE | 2084 | 4768 |
| 1977 | 4662 | 2031 | 4715 | 2085 | 4769 |
| 1978 | 4663 | 2032 | 4716 | 2086 | 4770 |
| 1979 | 4664 | 2033 | 4717 | 2087 | 4771 |
| 1980 | 4665 | 2034 | 4718 | 2088 | 4772 |
| 1981 | 4666 | 2035 | 4719 | 2089 | 4773 |
| 1982 | 4667 | 2036 | 4720 | 2090 | 4774 |
| 1983 | 4668 | 2037 | 4721 | 2091 | 4775 |
| 1984 | 4669 | 2038 | 4722 | 2092 | 4776 |
| 1985 | 4670 | 2039 | 4723 | 2093 | 4777 |
| 1986 | 4671 | 2040 | 4724 | 2094 | 4778 |

TABLE 2 (cont)

| | | | | | |
|------|------|------|------|------|------|
| 2095 | 4779 | 2149 | 4833 | 2203 | 4886 |
| 2096 | 4780 | 2150 | 4834 | 2204 | 4887 |
| 2097 | 4781 | 2151 | NONE | 2205 | 4888 |
| 2098 | 4782 | 2152 | 4835 | 2206 | 4889 |
| 2099 | 4783 | 2153 | 4836 | 2207 | 4890 |
| 2100 | 4784 | 2154 | 4837 | 2208 | 4891 |
| 2101 | 4785 | 2155 | 4838 | 2209 | 4892 |
| 2102 | 4786 | 2156 | 4839 | 2210 | 4893 |
| 2103 | 4787 | 2157 | 4840 | 2211 | 4894 |
| 2104 | 4788 | 2158 | 4841 | 2212 | 4895 |
| 2105 | 4789 | 2159 | 4842 | 2213 | 4896 |
| 2106 | 4790 | 2160 | 4843 | 2214 | 4897 |
| 2107 | 4791 | 2161 | 4844 | 2215 | 4898 |
| 2108 | 4792 | 2162 | 4845 | 2216 | 4899 |
| 2109 | 4793 | 2163 | 4846 | 2217 | 4900 |
| 2110 | 4794 | 2164 | 4847 | 2218 | 4901 |
| 2111 | 4795 | 2165 | 4848 | 2219 | 4902 |
| 2112 | 4796 | 2166 | 4849 | 2220 | 4903 |
| 2113 | 4797 | 2167 | 4850 | 2221 | 4904 |
| 2114 | 4798 | 2168 | 4851 | 2222 | 4905 |
| 2115 | 4799 | 2169 | 4852 | 2223 | 4906 |
| 2116 | 4800 | 2170 | 4853 | 2224 | 4907 |
| 2117 | 4801 | 2171 | 4854 | 2225 | 4908 |
| 2118 | 4802 | 2172 | 4855 | 2226 | 4909 |
| 2119 | 4803 | 2173 | 4856 | 2227 | 4910 |
| 2120 | 4804 | 2174 | 4857 | 2228 | 4911 |
| 2121 | 4805 | 2175 | 4858 | 2229 | 4912 |
| 2122 | 4806 | 2176 | 4859 | 2230 | 4913 |
| 2123 | 4807 | 2177 | 4860 | 2231 | 4914 |
| 2124 | 4808 | 2178 | 4861 | 2232 | 4915 |
| 2125 | 4809 | 2179 | 4862 | 2233 | 4916 |
| 2126 | 4810 | 2180 | 4863 | 2234 | 4917 |
| 2127 | 4811 | 2181 | 4864 | 2235 | 4918 |
| 2128 | 4812 | 2182 | 4865 | 2236 | 4919 |
| 2129 | 4813 | 2183 | 4866 | 2237 | 4920 |
| 2130 | 4814 | 2184 | 4867 | 2238 | 4921 |
| 2131 | 4815 | 2185 | 4868 | 2239 | 4922 |
| 2132 | 4816 | 2186 | 4869 | 2240 | 4923 |
| 2133 | 4817 | 2187 | 4870 | 2241 | 4924 |
| 2134 | 4818 | 2188 | 4871 | 2242 | 4925 |
| 2135 | 4819 | 2189 | 4872 | 2243 | 4926 |
| 2136 | 4820 | 2190 | 4873 | 2244 | 4927 |
| 2137 | 4821 | 2191 | 4874 | 2245 | 4928 |
| 2138 | 4822 | 2192 | 4875 | 2246 | 4929 |
| 2139 | 4823 | 2193 | 4876 | 2247 | 4930 |
| 2140 | 4824 | 2194 | 4877 | 2248 | NONE |
| 2141 | 4825 | 2195 | 4878 | 2249 | 4931 |
| 2142 | 4826 | 2196 | 4879 | 2250 | 4932 |
| 2143 | 4827 | 2197 | 4880 | 2251 | 4933 |
| 2144 | 4828 | 2198 | 4881 | 2252 | 4934 |
| 2145 | 4829 | 2199 | 4882 | 2253 | 4935 |
| 2146 | 4830 | 2200 | 4883 | 2254 | 4936 |
| 2147 | 4831 | 2201 | 4884 | 2255 | 4937 |
| 2148 | 4832 | 2202 | 4885 | 2256 | 4938 |

TABLE 2 (cont)

| | | | | | |
|------|------|------|------|------|------|
| 2257 | 4939 | 2311 | 4993 | 2365 | 5046 |
| 2258 | 4940 | 2312 | 4994 | 2366 | 5047 |
| 2259 | 4941 | 2313 | 4995 | 2367 | 5048 |
| 2260 | 4942 | 2314 | 4996 | 2368 | 5049 |
| 2261 | 4943 | 2315 | 4997 | 2369 | 5050 |
| 2262 | 4944 | 2316 | 4998 | 2370 | 5051 |
| 2263 | 4945 | 2317 | 4999 | 2371 | NONE |
| 2264 | 4946 | 2318 | 5000 | 2372 | 5052 |
| 2265 | 4947 | 2319 | 5001 | 2373 | 5053 |
| 2266 | 4948 | 2320 | 5002 | 2374 | 5054 |
| 2267 | 4949 | 2321 | 5003 | 2375 | 5055 |
| 2268 | 4950 | 2322 | 5004 | 2376 | 5056 |
| 2269 | 4951 | 2323 | 5005 | 2377 | 5057 |
| 2270 | 4952 | 2324 | 5006 | 2378 | 5058 |
| 2271 | 4953 | 2325 | 5007 | 2379 | 5059 |
| 2272 | 4954 | 2326 | 5008 | 2380 | 5060 |
| 2273 | 4955 | 2327 | 5009 | 2381 | 5061 |
| 2274 | 4956 | 2328 | 5010 | 2382 | 5062 |
| 2275 | 4957 | 2329 | 5011 | 2383 | 5063 |
| 2276 | 4958 | 2330 | 5012 | 2384 | 5064 |
| 2277 | 4959 | 2331 | 5013 | 2385 | 5065 |
| 2278 | 4960 | 2332 | 5014 | 2386 | 5066 |
| 2279 | 4961 | 2333 | 5015 | 2387 | 5067 |
| 2280 | 4962 | 2334 | 5016 | 2388 | 5068 |
| 2281 | 4963 | 2335 | 5017 | 2389 | 5069 |
| 2282 | 4964 | 2336 | 5018 | 2390 | 5070 |
| 2283 | 4965 | 2337 | 5019 | 2391 | 5071 |
| 2284 | 4966 | 2338 | 5020 | 2392 | 5072 |
| 2285 | 4967 | 2339 | 5021 | 2393 | 5073 |
| 2286 | 4968 | 2340 | NONE | 2394 | 5074 |
| 2287 | 4969 | 2341 | 5022 | 2395 | 5075 |
| 2288 | 4970 | 2342 | 5023 | 2396 | 5076 |
| 2289 | 4971 | 2343 | 5024 | 2397 | 5077 |
| 2290 | 4972 | 2344 | 5025 | 2398 | 5078 |
| 2291 | 4973 | 2345 | 5026 | 2399 | 5079 |
| 2292 | 4974 | 2346 | 5027 | 2400 | 5080 |
| 2293 | 4975 | 2347 | 5028 | 2401 | 5081 |
| 2294 | 4976 | 2348 | 5029 | 2402 | 5082 |
| 2295 | 4977 | 2349 | 5030 | 2403 | 5083 |
| 2296 | 4978 | 2350 | 5031 | 2404 | 5084 |
| 2297 | 4979 | 2351 | 5032 | 2405 | 5085 |
| 2298 | 4980 | 2352 | 5033 | 2406 | 5086 |
| 2299 | 4981 | 2353 | 5034 | 2407 | 5087 |
| 2300 | 4982 | 2354 | 5035 | 2408 | 5088 |
| 2301 | 4983 | 2355 | 5036 | 2409 | 5089 |
| 2302 | 4984 | 2356 | 5037 | 2410 | 5090 |
| 2303 | 4985 | 2357 | 5038 | 2411 | 5091 |
| 2304 | 4986 | 2358 | 5039 | 2412 | 5092 |
| 2305 | 4987 | 2359 | 5040 | 2413 | 5093 |
| 2306 | 4988 | 2360 | 5041 | 2414 | 5094 |
| 2307 | 4989 | 2361 | 5042 | 2415 | 5095 |
| 2308 | 4990 | 2362 | 5043 | 2416 | 5096 |
| 2309 | 4991 | 2363 | 5044 | 2417 | 5097 |
| 2310 | 4992 | 2364 | 5045 | 2418 | 5098 |

TABLE 2 (cont)

| | | | | | |
|------|------|------|------|------|------|
| 2419 | 5099 | 2473 | 5151 | 2527 | 5205 |
| 2420 | 5100 | 2474 | 5152 | 2528 | 5206 |
| 2421 | 5101 | 2475 | 5153 | 2529 | 5207 |
| 2422 | 5102 | 2476 | 5154 | 2530 | 5208 |
| 2423 | 5103 | 2477 | 5155 | 2531 | 5209 |
| 2424 | 5104 | 2478 | 5156 | 2532 | 5210 |
| 2425 | 5105 | 2479 | 5157 | 2533 | 5211 |
| 2426 | 5106 | 2480 | 5158 | 2534 | 5212 |
| 2427 | 5107 | 2481 | 5159 | 2535 | 5213 |
| 2428 | 5108 | 2482 | 5160 | 2536 | 5214 |
| 2429 | 5109 | 2483 | 5161 | 2537 | 5215 |
| 2430 | 5110 | 2484 | 5162 | 2538 | 5216 |
| 2431 | 5111 | 2485 | 5163 | 2539 | 5217 |
| 2432 | 5112 | 2486 | 5164 | 2540 | 5218 |
| 2433 | 5113 | 2487 | 5165 | 2541 | 5219 |
| 2434 | 5114 | 2488 | 5166 | 2542 | 5220 |
| 2435 | 5115 | 2489 | 5167 | 2543 | 5221 |
| 2436 | 5116 | 2490 | 5168 | 2544 | 5222 |
| 2437 | 5117 | 2491 | 5169 | 2545 | 5223 |
| 2438 | 5118 | 2492 | 5170 | 2546 | 5224 |
| 2439 | 5119 | 2493 | 5171 | 2547 | 5225 |
| 2440 | 5120 | 2494 | 5172 | 2548 | 5226 |
| 2441 | 5121 | 2495 | 5173 | 2549 | 5227 |
| 2442 | 5122 | 2496 | 5174 | 2550 | 5228 |
| 2443 | NONE | 2497 | 5175 | 2551 | 5229 |
| 2444 | 5123 | 2498 | 5176 | 2552 | 5230 |
| 2445 | 5124 | 2499 | 5177 | 2553 | 5231 |
| 2446 | 5125 | 2500 | 5178 | 2554 | 5232 |
| 2447 | 5126 | 2501 | 5179 | 2555 | 5233 |
| 2448 | 5127 | 2502 | 5180 | 2556 | 5234 |
| 2449 | 5128 | 2503 | 5181 | 2557 | 5235 |
| 2450 | 5129 | 2504 | 5182 | 2558 | 5236 |
| 2451 | 5130 | 2505 | 5183 | 2559 | 5237 |
| 2452 | 5131 | 2506 | 5184 | 2560 | 5238 |
| 2453 | 5132 | 2507 | 5185 | 2561 | 5239 |
| 2454 | 5133 | 2508 | 5186 | 2562 | 5240 |
| 2455 | 5134 | 2509 | 5187 | 2563 | 5241 |
| 2456 | 5135 | 2510 | 5188 | 2564 | 5242 |
| 2457 | 5136 | 2511 | 5189 | 2565 | 5243 |
| 2458 | 5137 | 2512 | 5190 | 2566 | 5244 |
| 2459 | 5138 | 2513 | 5191 | 2567 | 5245 |
| 2460 | 5139 | 2514 | 5192 | 2568 | 5246 |
| 2461 | 5140 | 2515 | 5193 | 2569 | 5247 |
| 2462 | 5141 | 2516 | 5194 | 2570 | 5248 |
| 2463 | 5142 | 2517 | 5195 | 2571 | 5249 |
| 2464 | 5143 | 2518 | 5196 | 2572 | 5250 |
| 2465 | 5144 | 2519 | 5197 | 2573 | 5251 |
| 2466 | 5145 | 2520 | 5198 | 2574 | 5252 |
| 2467 | 5146 | 2521 | 5199 | 2575 | 5253 |
| 2468 | 5147 | 2522 | 5200 | 2576 | 5254 |
| 2469 | NONE | 2523 | 5201 | 2577 | 5255 |
| 2470 | 5148 | 2524 | 5202 | 2578 | 5256 |
| 2471 | 5149 | 2525 | 5203 | 2579 | 5257 |
| 2472 | 5150 | 2526 | 5204 | 2580 | 5258 |

TABLE 2 (cont)

| | | | | | |
|------|------|------|------|------|------|
| 2581 | 5259 | 2635 | 5312 | 2689 | 5365 |
| 2582 | 5260 | 2636 | 5313 | 2690 | 5366 |
| 2583 | 5261 | 2637 | 5314 | 2691 | 5367 |
| 2584 | 5262 | 2638 | 5315 | 2692 | 5368 |
| 2585 | 5263 | 2639 | 5316 | 2693 | 5369 |
| 2586 | 5264 | 2640 | 5317 | 2694 | 5370 |
| 2587 | 5265 | 2641 | 5318 | 2695 | 5371 |
| 2588 | 5266 | 2642 | 5319 | 2696 | 5372 |
| 2589 | 5267 | 2643 | 5320 | 2697 | 5373 |
| 2590 | 5268 | 2644 | 5321 | 2698 | 5374 |
| 2591 | 5269 | 2645 | 5322 | 2699 | 5375 |
| 2592 | 5270 | 2646 | 5323 | 2700 | 5376 |
| 2593 | 5271 | 2647 | 5324 | 2701 | 5377 |
| 2594 | 5272 | 2648 | 5325 | 2702 | 5378 |
| 2595 | 5273 | 2649 | 5326 | 2703 | 5379 |
| 2596 | 5274 | 2650 | 5327 | | |
| 2597 | 5275 | 2651 | 5328 | | |
| 2598 | 5276 | 2652 | 5329 | | |
| 2599 | NONE | 2653 | 5330 | | |
| 2600 | 5277 | 2654 | 5331 | | |
| 2601 | 5278 | 2655 | 5332 | | |
| 2602 | 5279 | 2656 | 5333 | | |
| 2603 | 5280 | 2657 | 5334 | | |
| 2604 | 5281 | 2658 | 5335 | | |
| 2605 | 5282 | 2659 | 5336 | | |
| 2606 | 5283 | 2660 | 5337 | | |
| 2607 | 5284 | 2661 | 5338 | | |
| 2608 | 5285 | 2662 | 5339 | | |
| 2609 | 5286 | 2663 | 5340 | | |
| 2610 | 5287 | 2664 | 5341 | | |
| 2611 | 5288 | 2665 | 5342 | | |
| 2612 | 5289 | 2666 | 5343 | | |
| 2613 | 5290 | 2667 | 5344 | | |
| 2614 | 5291 | 2668 | 5345 | | |
| 2615 | 5292 | 2669 | 5346 | | |
| 2616 | 5293 | 2670 | 5347 | | |
| 2617 | 5294 | 2671 | 5348 | | |
| 2618 | 5295 | 2672 | 5349 | | |
| 2619 | 5296 | 2673 | 5350 | | |
| 2620 | 5297 | 2674 | 5351 | | |
| 2621 | 5298 | 2675 | 5352 | | |
| 2622 | 5299 | 2676 | 5353 | | |
| 2623 | 5300 | 2677 | 5354 | | |
| 2624 | 5301 | 2678 | 5355 | | |
| 2625 | 5302 | 2679 | 5356 | | |
| 2626 | 5303 | 2680 | 5357 | | |
| 2627 | 5304 | 2681 | NONE | | |
| 2628 | 5305 | 2682 | 5358 | | |
| 2629 | 5306 | 2683 | 5359 | | |
| 2630 | 5307 | 2684 | 5360 | | |
| 2631 | 5308 | 2685 | 5361 | | |
| 2632 | 5309 | 2686 | 5362 | | |
| 2633 | 5310 | 2687 | 5363 | | |
| 2634 | 5311 | 2688 | 5364 | | |

TABLE 3

COLD RESPONSIVE SEQUENCES

| SEQ ID NO: | AFFYMETRIX ID NO: | SEQ ID NO: | AFFYMETRIX ID NO: | SEQ ID NO: | AFFYMETRIX ID NO: |
|---------------|----------------------|---------------|----------------------|---------------|----------------------|
| 1 | 11991_G_AT | 50 | 12269_S_AT | 98 | 12550_S_AT |
| 2 | 11992_AT | 51 | 12270_AT | | 17103_S_AT |
| 3 | 11997_AT | 52 | 12284_AT | 99 | 12552_AT |
| 4 | 11998_AT | 53 | 12287_S_AT | 100 | 12555_S_AT |
| 5 | 12001_AT | | 17570_G_AT | 101 | 12576_S_AT |
| 6 | 12006_S_AT | 54 | 12293_AT | 102 | 12581_S_AT |
| 7 | 12007_AT | 55 | 12294_S_AT | | 16645_S_AT |
| 8 | 12009_AT | 56 | 12300_AT | 103 | 12587_AT |
| 9 | 12018_AT | 57 | 12307_AT | 104 | 12597_AT |
| 10 | 12022_AT | 58 | 12312_AT | 105 | 12602_AT |
| 11 | 12026_AT | 59 | 12315_AT | 106 | 12610_AT |
| 12 | 12031_AT | 60 | 12324_I_AT | 107 | 12631_AT |
| 13 | 12047_AT | 61 | 12331_S_AT | 108 | 12646_AT |
| 14 | 12051_AT | 62 | 12336_AT | 109 | 12649_AT |
| 15 | 12052_AT | 63 | 12344_AT | 110 | 12650_AT |
| 16 | 12053_AT | 64 | 12348_AT | 111 | 12653_AT |
| 17 | 12060_AT | 65 | 12353_AT | 112 | 12661_AT |
| 18 | 12072_AT | 66 | 12359_S_AT | 113 | 12666_AT |
| 19 | 12074_AT | 67 | 12372_AT | 114 | 12674_AT |
| 20 | 12102_AT | 68 | 12374_I_AT | 115 | 12675_S_AT |
| 21 | 12112_AT | | 12726_F_AT | 116 | 12678_I_AT |
| 22 | 12117_AT | 69 | 12390_AT | 117 | 12681_S_AT |
| 23 | 12125_AT | 70 | 12395_S_AT | 118 | 12688_AT |
| 24 | 12130_AT | 71 | 12405_AT | 119 | 12702_AT |
| 25 | 12143_AT | 72 | 12408_AT | 120 | 12705_F_AT |
| 26 | 12145_S_AT | 73 | 12410_G_AT | 121 | 12736_F_AT |
| 27 | 12149_AT | 74 | 12419_AT | 122 | 12737_F_AT |
| 28 | 12156_AT | 75 | 12427_AT | 123 | 12758_AT |
| 29 | 12163_AT | 76 | 12431_AT | 124 | 12760_G_AT |
| 30 | 12166_I_AT | 77 | 12436_AT | 125 | 12762_R_AT |
| 31 | 12167_AT | 78 | 12438_AT | 126 | 12764_F_AT |
| 32 | 12169_I_AT | 79 | 12443_S_AT | 127 | 12766_AT |
| 33 | 12175_AT | 80 | 12447_AT | | 15115_F_AT |
| 34 | 12176_AT | 81 | 12450_S_AT | 128 | 12767_AT |
| 35 | 12179_AT | 82 | 12452_AT | 129 | 12768_AT |
| 36 | 12187_AT | 83 | 12474_AT | 130 | 12772_AT |
| | 15920_I_AT | 84 | 12477_AT | 131 | 12773_AT |
| 37 | 12195_AT | 85 | 12491_AT | 132 | 12776_AT |
| 38 | 12196_AT | 86 | 12497_AT | 133 | 12788_AT |
| 39 | 12198_AT | 87 | 12500_S_AT | 134 | 12793_AT |
| 40 | 12200_AT | 88 | 12503_AT | 135 | 12794_AT |
| 41 | 12202_AT | 89 | 12515_AT | 136 | 12802_AT |
| 42 | 12214_G_AT | 90 | 12516_S_AT | 137 | 12809_G_AT |
| 43 | 12219_AT | 91 | 12523_AT | 138 | 12812_AT |
| 44 | 12224_AT | 92 | 12526_AT | 139 | 12815_AT |
| 45 | 12226_AT | 93 | 12527_AT | 140 | 12816_AT |
| 46 | 12233_AT | 94 | 12532_AT | 141 | 12818_AT |
| 47 | 12240_AT | 95 | 12534_G_AT | 142 | 12824_S_AT |
| 48 | 12253_G_AT | 96 | 12544_AT | 143 | 12828_S_AT |
| 49 | 12256_AT | 97 | 12549_S_AT | 144 | 12842_S_AT |

TABLE 3 (cont)

| | | | | | |
|-----|------------|-----|------------|-----|------------|
| 145 | 12846_S_AT | 194 | 13086_R_AT | 238 | 13285_S_AT |
| 146 | 12858_AT | 195 | 13087_AT | 239 | 13288_S_AT |
| 147 | 12860_S_AT | 196 | 13090_AT | | 17043_S_AT |
| 148 | 12861_S_AT | 197 | 13092_S_AT | 240 | 13292_S_AT |
| 149 | 12881_S_AT | | 16950_S_AT | 241 | 13296_S_AT |
| | 17600_S_AT | 198 | 13098_AT | 242 | 13297_S_AT |
| 150 | 12889_S_AT | 199 | 13100_AT | 243 | 13299_S_AT |
| 151 | 12901_S_AT | 200 | 13103_AT | | 15166_S_AT |
| 152 | 12902_AT | 201 | 13105_AT | 244 | 13332_AT |
| 153 | 12904_S_AT | 202 | 13107_S_AT | 245 | 13347_AT |
| 154 | 12905_S_AT | 203 | 13108_AT | 246 | 13351_AT |
| 155 | 12908_S_AT | 204 | 13109_AT | 247 | 13352_AT |
| 156 | 12910_S_AT | 205 | 13114_AT | 248 | 13355_AT |
| | 16385_S_AT | 206 | 13118_F_AT | 249 | 13404_AT |
| 157 | 12914_S_AT | 207 | 13119_AT | 250 | 13422_AT |
| | 15783_S_AT | 208 | 13120_AT | 251 | 13459_AT |
| | 17645_S_AT | 209 | 13123_AT | 252 | 13460_AT |
| 158 | 12916_S_AT | 210 | 13128_AT | 253 | 13461_S_AT |
| 159 | 12923_S_AT | 211 | 13133_S_AT | 254 | 13467_AT |
| 160 | 12926_S_AT | | 17430_S_AT | 255 | 13488_AT |
| 161 | 12927_S_AT | 212 | 13135_S_AT | 256 | 13523_S_AT |
| 162 | 12931_S_AT | 213 | 13139_AT | 257 | 13529_AT |
| 163 | 12937_R_AT | 214 | 13140_AT | 258 | 13539_I_AT |
| 164 | 12941_G_AT | 215 | 13143_AT | | 14631_S_AT |
| 165 | 12942_AT | 216 | 13151_G_AT | 259 | 13541_AT |
| 166 | 12947_AT | 217 | 13160_AT | 260 | 13542_AT |
| 167 | 12949_AT | 218 | 13161_AT | 261 | 13545_S_AT |
| 168 | 12953_AT | 219 | 13162_AT | 262 | 13552_AT |
| 169 | 12956_I_AT | 220 | 13165_AT | 263 | 13556_I_AT |
| 170 | 12959_AT | 221 | 13166_AT | 264 | 13561_AT |
| 171 | 12966_S_AT | 222 | 13167_AT | 265 | 13563_S_AT |
| 172 | 12975_AT | 223 | 13179_AT | 266 | 13567_AT |
| 173 | 12983_AT | 224 | 13181_AT | 267 | 13568_AT |
| 174 | 12984_AT | 225 | 13185_AT | 268 | 13571_AT |
| 175 | 12987_S_AT | 226 | 13193_S_AT | 269 | 13575_AT |
| 176 | 12994_S_AT | 227 | 13213_S_AT | 270 | 13576_AT |
| 177 | 13002_AT | | 16004_S_AT | 271 | 13583_AT |
| 178 | 13009_I_AT | 228 | 13219_S_AT | 272 | 13598_AT |
| 179 | 13011_AT | | 20288_G_AT | 273 | 13601_AT |
| 180 | 13018_AT | 229 | 13220_S_AT | 274 | 13604_AT |
| 181 | 13023_AT | | 13221_AT | 275 | 13613_AT |
| 182 | 13024_AT | | 18929_S_AT | 276 | 13616_S_AT |
| 183 | 13034_S_AT | 230 | 13233_AT | | 16544_S_AT |
| 184 | 13046_G_AT | | 14301_S_AT | 277 | 13617_AT |
| 185 | 13048_S_AT | 231 | 13243_R_AT | 278 | 13618_S_AT |
| | 13495_S_AT | 232 | 13254_S_AT | 279 | 13619_AT |
| 186 | 13054_AT | 233 | 13260_S_AT | 280 | 13621_G_AT |
| 187 | 13067_S_AT | | 15660_S_AT | 281 | 13623_R_AT |
| 188 | 13068_AT | 234 | 13273_S_AT | 282 | 13629_S_AT |
| 189 | 13073_S_AT | | 16105_S_AT | 283 | 13631_AT |
| 190 | 13078_S_AT | 235 | 13274_S_AT | 284 | 13635_AT |
| 191 | 13079_AT | | 17077_S_AT | 285 | 13646_AT |
| 192 | 13081_S_AT | 236 | 13276_S_AT | 286 | 13650_AT |
| 193 | 13083_AT | 237 | 13278_F_AT | 287 | 13653_AT |

TABLE 3 (cont)

| | | | | | |
|-----|------------|-----|------------|-----|------------|
| 288 | 13655_AT | 332 | 13989_AT | 383 | 14393_AT |
| 289 | 13656_AT | | 20674_S_AT | 384 | 14421_AT |
| 290 | 13657_AT | 333 | 14010_AT | 385 | 14436_AT |
| 291 | 13666_S_AT | 334 | 14013_AT | 386 | 14448_AT |
| | 17083_S_AT | 335 | 14014_AT | 387 | 14450_AT |
| 292 | 13667_S_AT | 336 | 14019_AT | 388 | 14454_AT |
| 293 | 13669_S_AT | 337 | 14021_R_AT | 389 | 14459_AT |
| | 17074_S_AT | 338 | 14025_S_AT | 390 | 14478_AT |
| 294 | 13670_S_AT | | 18909_S_AT | 391 | 14482_AT |
| | 15206_S_AT | 339 | 14027_AT | 392 | 14485_AT |
| 295 | 13671_S_AT | 340 | 14030_AT | 393 | 14492_S_AT |
| | 16805_S_AT | 341 | 14044_AT | 394 | 14505_AT |
| 296 | 13678_S_AT | 342 | 14048_AT | 395 | 14510_AT |
| 297 | 13688_S_AT | 343 | 14056_AT | 396 | 14511_AT |
| 298 | 13690_S_AT | 344 | 14057_AT | 397 | 14517_AT |
| | 16065_S_AT | 345 | 14058_AT | 398 | 14519_AT |
| 299 | 13691_S_AT | 346 | 14059_AT | 399 | 14525_S_AT |
| | 16117_S_AT | 347 | 14061_AT | 400 | 14527_AT |
| 300 | 13692_S_AT | 348 | 14068_S_AT | 401 | 14534_S_AT |
| | 16118_S_AT | 349 | 14072_AT | 402 | 14538_R_AT |
| 301 | 13700_AT | 350 | 14073_AT | 403 | 14554_AT |
| 302 | 13704_S_AT | 351 | 14074_AT | 404 | 14558_AT |
| 303 | 13714_AT | 352 | 14084_AT | 405 | 14559_S_AT |
| 304 | 13715_AT | 353 | 14095_S_AT | 406 | 14566_AT |
| 305 | 13724_AT | 354 | 14100_AT | 407 | 14572_AT |
| 306 | 13748_AT | 355 | 14101_AT | 408 | 14579_AT |
| 307 | 13759_AT | 356 | 14103_AT | 409 | 14587_AT |
| 308 | 13767_AT | 357 | 14105_AT | 410 | 14591_AT |
| 309 | 13785_AT | 358 | 14106_AT | 411 | 14595_AT |
| 310 | 13803_AT | 359 | 14121_AT | 412 | 14602_AT |
| 311 | 13850_I_AT | 360 | 14129_S_AT | 413 | 14603_AT |
| 312 | 13876_AT | 361 | 14133_S_AT | 414 | 14605_AT |
| 313 | 13880_S_AT | 362 | 14143_AT | 415 | 14620_S_AT |
| 314 | 13883_AT | 363 | 14145_AT | 416 | 14626_S_AT |
| 315 | 13887_S_AT | 364 | 14148_AT | 417 | 14630_S_AT |
| 316 | 13895_AT | 365 | 14186_AT | | 16559_S_AT |
| 317 | 13904_S_AT | 366 | 14194_AT | 418 | 14637_S_AT |
| | 18722_S_AT | 367 | 14196_AT | | 17122_S_AT |
| 318 | 13906_S_AT | 368 | 14223_AT | 419 | 14642_F_AT |
| 319 | 13908_S_AT | 369 | 14234_AT | 420 | 14650_S_AT |
| | 18597_AT | 370 | 14236_AT | | 15150_S_AT |
| 320 | 13923_AT | 371 | 14251_F_AT | 421 | 14654_S_AT |
| 321 | 13927_AT | 372 | 14252_F_AT | 422 | 14667_S_AT |
| 322 | 13932_AT | 373 | 14270_AT | | 18299_S_AT |
| 323 | 13935_AT | 374 | 14298_G_AT | 423 | 14669_S_AT |
| 324 | 13940_AT | | 17581_G_AT | | 16136_S_AT |
| 325 | 13949_S_AT | 375 | 14303_S_AT | 424 | 14672_S_AT |
| 326 | 13954_G_AT | 376 | 14312_AT | 425 | 14679_S_AT |
| 327 | 13971_S_AT | 377 | 14316_AT | 426 | 14682_I_AT |
| 328 | 13973_AT | 378 | 14339_AT | 427 | 14689_AT |
| 329 | 13983_AT | 379 | 14366_AT | 428 | 14697_G_AT |
| 330 | 13985_S_AT | 380 | 14369_AT | | 16902_AT |
| 331 | 13987_S_AT | 381 | 14388_AT | 429 | 14701_S_AT |
| | 18738_F_AT | 382 | 14392_G_AT | | 14734_S_AT |

TABLE 3 (cont)

| | | | | | |
|-----|------------|-----|------------|-----|------------|
| 430 | 14703_AT | 483 | 15130_S_AT | 534 | 15489_AT |
| 431 | 14711_S_AT | 484 | 15131_S_AT | 535 | 15490_AT |
| 432 | 14712_S_AT | 485 | 15132_S_AT | 536 | 15503_AT |
| | 20530_S_AT | | 17585_S_AT | 537 | 15505_AT |
| 433 | 14713_S_AT | 486 | 15139_S_AT | 538 | 15510_R_AT |
| 434 | 14715_S_AT | 487 | 15143_S_AT | 539 | 15512_AT |
| 435 | 14728_S_AT | 488 | 15146_S_AT | 540 | 15514_AT |
| 436 | 14731_S_AT | 489 | 15159_S_AT | 541 | 15515_R_AT |
| 437 | 14781_AT | | 15160_S_AT | 542 | 15517_S_AT |
| 438 | 14797_S_AT | 490 | 15162_S_AT | 543 | 15518_AT |
| 439 | 14800_AT | 491 | 15167_S_AT | 544 | 15529_AT |
| 440 | 14809_AT | 492 | 15171_S_AT | 545 | 15534_F_AT |
| 441 | 14843_AT | 493 | 15174_F_AT | 546 | 15538_AT |
| 442 | 14847_AT | 494 | 15178_S_AT | 547 | 15541_AT |
| 443 | 14872_AT | 495 | 15185_S_AT | 548 | 15543_AT |
| 444 | 14886_AT | | 18023_S_AT | 549 | 15544_AT |
| 445 | 14896_AT | 496 | 15188_S_AT | 550 | 15551_AT |
| 446 | 14900_AT | 497 | 15193_S_AT | 551 | 15574_S_AT |
| 447 | 14908_AT | 498 | 15196_S_AT | 552 | 15576_S_AT |
| 448 | 14912_AT | 499 | 15197_S_AT | 553 | 15577_S_AT |
| 449 | 14914_AT | 500 | 15201_F_AT | 554 | 15578_S_AT |
| 450 | 14942_AT | 501 | 15213_S_AT | 555 | 15583_S_AT |
| 451 | 14945_AT | 502 | 15243_AT | 556 | 15588_S_AT |
| 452 | 14955_AT | 503 | 15256_AT | 557 | 15595_S_AT |
| 453 | 14957_S_AT | 504 | 15270_AT | 558 | 15600_S_AT |
| 454 | 14958_AT | 505 | 15319_AT | 559 | 15602_F_AT |
| 455 | 14965_AT | 506 | 15325_AT | 560 | 15608_S_AT |
| 456 | 14974_AT | 507 | 15337_AT | 561 | 15613_S_AT |
| 457 | 14980_AT | 508 | 15341_AT | 562 | 15616_S_AT |
| 458 | 14981_AT | 509 | 15343_AT | 563 | 15618_S_AT |
| 459 | 14984_S_AT | 510 | 15348_AT | 564 | 15620_S_AT |
| 460 | 14995_AT | 511 | 15350_AT | 565 | 15627_S_AT |
| 461 | 15004_AT | 512 | 15355_S_AT | 566 | 15634_S_AT |
| 462 | 15009_AT | 513 | 15367_AT | | 16125_S_AT |
| 463 | 15010_AT | 514 | 15372_AT | | 18046_S_AT |
| 464 | 15024_AT | 515 | 15379_AT | 567 | 15637_S_AT |
| 465 | 15026_AT | 516 | 15381_AT | 568 | 15639_S_AT |
| 466 | 15036_R_AT | 517 | 15383_AT | 569 | 15642_S_AT |
| 467 | 15054_AT | 518 | 15384_AT | 570 | 15643_S_AT |
| 468 | 15056_AT | 519 | 15385_AT | 571 | 15651_F_AT |
| 469 | 15057_AT | 520 | 15387_AT | 572 | 15652_S_AT |
| 470 | 15066_AT | 521 | 15410_AT | 573 | 15665_S_AT |
| 471 | 15073_AT | 522 | 15417_S_AT | 574 | 15667_S_AT |
| 472 | 15081_AT | 523 | 15422_AT | | 18610_S_AT |
| 473 | 15083_AT | 524 | 15423_AT | 575 | 15668_S_AT |
| 474 | 15091_AT | 525 | 15431_AT | 576 | 15671_S_AT |
| 475 | 15097_S_AT | 526 | 15433_AT | 577 | 15675_S_AT |
| 476 | 15101_S_AT | 527 | 15452_AT | 578 | 15679_S_AT |
| 477 | 15102_S_AT | 528 | 15464_AT | 579 | 15685_S_AT |
| 478 | 15107_S_AT | 529 | 15468_AT | 580 | 15687_F_AT |
| 479 | 15112_S_AT | 530 | 15471_AT | 581 | 15688_S_AT |
| 480 | 15116_F_AT | 531 | 15472_AT | 582 | 15689_S_AT |
| 481 | 15118_S_AT | 532 | 15475_S_AT | 583 | 15692_S_AT |
| 482 | 15122_S_AT | 533 | 15485_AT | 584 | 15694_S_AT |

TABLE 3 (cont)

| | | | | | |
|-----|------------|-----|------------|-----|------------|
| 585 | 15712_S_AT | 634 | 16089_S_AT | 686 | 16496_S_AT |
| 586 | 15808_AT | 635 | 16090_S_AT | 687 | 16499_AT |
| 587 | 15845_AT | 636 | 16102_S_AT | 688 | 16510_AT |
| 588 | 15848_AT | 637 | 16103_S_AT | 689 | 16511_AT |
| 589 | 15850_AT | 638 | 16108_S_AT | 690 | 16512_S_AT |
| | 20406_G_AT | 639 | 16112_S_AT | | 18085_R_AT |
| 590 | 15858_AT | 640 | 16134_S_AT | 691 | 16514_AT |
| 591 | 15862_AT | 641 | 16137_S_AT | 692 | 16516_AT |
| 592 | 15868_AT | 642 | 16138_S_AT | 693 | 16517_AT |
| 593 | 15878_AT | 643 | 16140_S_AT | 694 | 16526_AT |
| 594 | 15894_AT | 644 | 16143_S_AT | 695 | 16528_AT |
| 595 | 15900_AT | 645 | 16145_S_AT | 696 | 16531_S_AT |
| 596 | 15901_AT | 646 | 16148_S_AT | 697 | 16535_S_AT |
| 597 | 15902_AT | 647 | 16151_S_AT | 698 | 16537_S_AT |
| 598 | 15912_AT | 648 | 16155_S_AT | 699 | 16538_S_AT |
| 599 | 15913_AT | 649 | 16158_F_AT | 700 | 16543_S_AT |
| 600 | 15928_AT | 650 | 16160_F_AT | 701 | 16550_S_AT |
| 601 | 15940_AT | 651 | 16162_S_AT | 702 | 16554_S_AT |
| 602 | 15941_AT | 652 | 16168_S_AT | 703 | 16567_S_AT |
| 603 | 15945_AT | 653 | 16169_S_AT | 704 | 16571_S_AT |
| 604 | 15948_S_AT | 654 | 16171_S_AT | 705 | 16576_F_AT |
| 605 | 15956_AT | 655 | 16172_S_AT | 706 | 16577_S_AT |
| 606 | 15960_AT | 656 | 16184_AT | 707 | 16579_S_AT |
| | 16466_S_AT | 657 | 16192_AT | 708 | 16580_S_AT |
| 607 | 15976_AT | 658 | 16222_AT | 709 | 16583_S_AT |
| 608 | 15978_AT | 659 | 16242_AT | 710 | 16584_S_AT |
| 609 | 15986_S_AT | 660 | 16244_AT | | 18706_S_AT |
| 610 | 15990_AT | 661 | 16250_AT | 711 | 16593_S_AT |
| 611 | 16009_S_AT | 662 | 16286_AT | 712 | 16595_S_AT |
| 612 | 16015_AT | 663 | 16288_AT | 713 | 16598_S_AT |
| 613 | 16019_AT | 664 | 16294_S_AT | 714 | 16604_S_AT |
| 614 | 16024_AT | 665 | 16296_AT | 715 | 16605_S_AT |
| 615 | 16034_AT | 666 | 16297_AT | 716 | 16610_S_AT |
| 616 | 16036_I_AT | 667 | 16325_AT | 717 | 16611_S_AT |
| | 18729_AT | 668 | 16346_S_AT | 718 | 16614_S_AT |
| 617 | 16039_S_AT | 669 | 16357_AT | 719 | 16617_S_AT |
| 618 | 16040_AT | 670 | 16380_AT | 720 | 16618_S_AT |
| 619 | 16042_S_AT | 671 | 16382_AT | 721 | 16620_S_AT |
| 620 | 16047_AT | 672 | 16393_S_AT | 722 | 16621_S_AT |
| 621 | 16049_S_AT | 673 | 16402_S_AT | 723 | 16631_S_AT |
| 622 | 16051_S_AT | 674 | 16411_S_AT | 724 | 16634_S_AT |
| 623 | 16055_S_AT | 675 | 16442_S_AT | 725 | 16635_S_AT |
| 624 | 16059_S_AT | 676 | 16446_AT | 726 | 16636_S_AT |
| 625 | 16062_S_AT | 677 | 16448_G_AT | 727 | 16639_S_AT |
| 626 | 16066_S_AT | 678 | 16453_S_AT | 728 | 16640_S_AT |
| 627 | 16069_S_AT | 679 | 16457_S_AT | 729 | 16650_S_AT |
| 628 | 16074_S_AT | 680 | 16465_AT | 730 | 16652_S_AT |
| 629 | 16076_S_AT | | 16916_S_AT | 731 | 16654_AT |
| 630 | 16077_S_AT | 681 | 16470_S_AT | 732 | 16672_AT |
| | 17579_S_AT | | 18735_S_AT | 733 | 16673_AT |
| 631 | 16079_S_AT | 682 | 16481_S_AT | 734 | 16687_S_AT |
| 632 | 16084_S_AT | 683 | 16486_AT | 735 | 16747_AT |
| | 17998_S_AT | 684 | 16487_AT | 736 | 16753_AT |
| 633 | 16087_S_AT | 685 | 16488_AT | 737 | 16768_AT |

TABLE 3 (cont)

| | | | | | |
|-----|------------|-----|------------|-----|------------|
| 738 | 16777_AT | 790 | 17123_S_AT | 843 | 17562_AT |
| 739 | 16784_AT | 791 | 17129_S_AT | 844 | 17564_S_AT |
| 740 | 16807_AT | 792 | 17132_AT | | 19361_S_AT |
| 741 | 16811_AT | 793 | 17166_AT | 845 | 17565_S_AT |
| 742 | 16845_AT | 794 | 17206_AT | 846 | 17568_AT |
| 743 | 16894_AT | 795 | 17207_AT | 847 | 17573_AT |
| 744 | 16899_AT | 796 | 17215_AT | 848 | 17577_G_AT |
| 745 | 16911_AT | 797 | 17237_AT | 849 | 17578_AT |
| 746 | 16920_AT | 798 | 17247_AT | 850 | 17596_AT |
| 747 | 16921_AT | 799 | 17254_AT | 851 | 17627_AT |
| 748 | 16924_S_AT | 800 | 17286_AT | 852 | 17631_AT |
| 749 | 16926_S_AT | 801 | 17288_S_AT | 853 | 17632_AT |
| 750 | 16931_S_AT | 802 | 17292_AT | 854 | 17672_AT |
| 751 | 16934_S_AT | 803 | 17300_AT | 855 | 17675_AT |
| 752 | 16937_AT | 804 | 17303_S_AT | 856 | 17677_AT |
| 753 | 16938_AT | 805 | 17318_AT | 857 | 17732_AT |
| 754 | 16942_AT | 806 | 17319_AT | 858 | 17743_AT |
| 755 | 16943_S_AT | 807 | 17322_AT | 859 | 17748_AT |
| | 18231_AT | 808 | 17323_AT | 860 | 17782_AT |
| 756 | 16949_S_AT | 809 | 17332_S_AT | 861 | 17823_S_AT |
| 757 | 16952_S_AT | 810 | 17374_AT | 862 | 17841_AT |
| 758 | 16956_AT | 811 | 17381_AT | 863 | 17849_S_AT |
| 759 | 16962_S_AT | 812 | 17388_AT | 864 | 17852_G_AT |
| 760 | 16965_S_AT | 813 | 17392_S_AT | 865 | 17857_AT |
| 761 | 16970_S_AT | 814 | 17405_AT | 866 | 17865_AT |
| | 18010_S_AT | 815 | 17415_AT | 867 | 17882_AT |
| 762 | 16977_AT | 816 | 17418_S_AT | 868 | 17885_AT |
| 763 | 16984_AT | 817 | 17420_AT | 869 | 17900_S_AT |
| 764 | 16996_S_AT | 818 | 17423_S_AT | 870 | 17910_AT |
| 765 | 16997_AT | 819 | 17426_AT | 871 | 17911_AT |
| 766 | 17000_AT | 820 | 17427_AT | 872 | 17916_AT |
| 767 | 17005_AT | 821 | 17429_S_AT | 873 | 17917_S_AT |
| 768 | 17010_S_AT | 822 | 17431_AT | 874 | 17918_AT |
| 769 | 17017_S_AT | 823 | 17439_G_AT | 875 | 17921_S_AT |
| 770 | 17031_S_AT | 824 | 17457_AT | 876 | 17922_AT |
| 771 | 17033_S_AT | 825 | 17458_AT | 877 | 17926_S_AT |
| 772 | 17053_S_AT | 826 | 17462_S_AT | 878 | 17933_AT |
| 773 | 17055_S_AT | 827 | 17463_AT | 879 | 17935_AT |
| 774 | 17063_S_AT | 828 | 17465_AT | 880 | 17956_I_AT |
| 775 | 17068_S_AT | 829 | 17466_S_AT | 881 | 17966_AT |
| 776 | 17070_S_AT | 830 | 17475_AT | 882 | 17967_AT |
| 777 | 17075_S_AT | 831 | 17479_AT | 883 | 17970_I_AT |
| 778 | 17084_S_AT | 832 | 17482_S_AT | 884 | 17978_S_AT |
| 779 | 17087_S_AT | 833 | 17495_S_AT | | 20635_S_AT |
| 780 | 17092_S_AT | 834 | 17508_S_AT | 885 | 17986_S_AT |
| 781 | 17095_S_AT | 835 | 17522_S_AT | 886 | 17993_AT |
| 782 | 17096_S_AT | 836 | 17523_S_AT | 887 | 18001_AT |
| 783 | 17102_S_AT | 837 | 17537_S_AT | 888 | 18003_AT |
| 784 | 17105_S_AT | 838 | 17538_S_AT | 889 | 18004_AT |
| 785 | 17109_S_AT | 839 | 17539_S_AT | 890 | 18005_AT |
| 786 | 17110_S_AT | 840 | 17546_S_AT | 891 | 18029_G_AT |
| 787 | 17113_S_AT | | 18694_S_AT | | 18030_I_AT |
| 788 | 17115_S_AT | 841 | 17557_S_AT | 892 | 18040_S_AT |
| 789 | 17116_S_AT | 842 | 17560_S_AT | 893 | 18045_AT |

TABLE 3 (cont)

| | | | | | |
|-----|------------|------|------------|------|------------|
| 894 | 18064_R_AT | 947 | 18580_AT | 1001 | 18889_AT |
| 895 | 18065_R_AT | 948 | 18581_AT | 1002 | 18892_S_AT |
| 896 | 18074_AT | 949 | 18584_AT | 1003 | 18901_AT |
| 897 | 18076_S_AT | 950 | 18587_S_AT | 1004 | 18911_AT |
| 898 | 18077_AT | 951 | 18588_AT | 1005 | 18917_I_AT |
| 899 | 18081_AT | 952 | 18591_AT | 1006 | 18939_AT |
| 900 | 18154_S_AT | 953 | 18592_S_AT | 1007 | 18947_I_AT |
| | 18365_S_AT | 954 | 18600_AT | 1008 | 18950_AT |
| 901 | 18165_AT | 955 | 18601_S_AT | 1009 | 18951_S_AT |
| 902 | 18174_AT | 956 | 18607_S_AT | 1010 | 18954_AT |
| 903 | 18176_AT | 957 | 18611_AT | 1011 | 18956_AT |
| 904 | 18194_I_AT | 958 | 18616_AT | 1012 | 18959_AT |
| 905 | 18197_AT | 959 | 18622_G_AT | 1013 | 18966_AT |
| 906 | 18198_AT | 960 | 18623_AT | 1014 | 18974_AT |
| 907 | 18213_AT | 961 | 18628_AT | 1015 | 18976_AT |
| 908 | 18219_AT | 962 | 18631_AT | 1016 | 18980_AT |
| 909 | 18221_AT | 963 | 18635_AT | 1017 | 18989_S_AT |
| 910 | 18222_AT | 964 | 18636_AT | 1018 | 18994_AT |
| 911 | 18226_S_AT | 965 | 18638_AT | 1019 | 19030_AT |
| 912 | 18232_AT | 966 | 18652_AT | 1020 | 19039_AT |
| 913 | 18237_AT | 967 | 18657_AT | 1021 | 19049_AT |
| 914 | 18241_AT | 968 | 18659_AT | 1022 | 19083_AT |
| 915 | 18257_AT | 969 | 18660_S_AT | 1023 | 19115_AT |
| 916 | 18258_S_AT | 970 | 18667_AT | 1024 | 19117_S_AT |
| 917 | 18269_S_AT | 971 | 18675_AT | 1025 | 19122_AT |
| 918 | 18274_S_AT | 972 | 18684_AT | 1026 | 19125_S_AT |
| 919 | 18275_AT | 973 | 18686_S_AT | 1027 | 19127_AT |
| 920 | 18278_AT | 974 | 18688_S_AT | 1028 | 19130_AT |
| 921 | 18282_AT | 975 | 18693_S_AT | 1029 | 19144_AT |
| 922 | 18283_AT | 976 | 18698_S_AT | 1030 | 19157_S_AT |
| 923 | 18290_AT | 977 | 18705_AT | 1031 | 19178_AT |
| 924 | 18291_AT | 978 | 18707_AT | 1032 | 19190_G_AT |
| 925 | 18306_AT | 979 | 18708_AT | 1033 | 19198_AT |
| 926 | 18316_AT | 980 | 18726_S_AT | 1034 | 19202_AT |
| 927 | 18317_AT | 981 | 18727_AT | 1035 | 19209_S_AT |
| 928 | 18327_S_AT | 982 | 18732_I_AT | 1036 | 19211_AT |
| 929 | 18337_S_AT | 983 | 18736_AT | 1037 | 19218_AT |
| 930 | 18339_AT | 984 | 18750_F_AT | 1038 | 19222_AT |
| 931 | 18347_S_AT | 985 | 18754_AT | 1039 | 19226_G_AT |
| 932 | 18383_AT | 986 | 18778_AT | 1040 | 19229_AT |
| 933 | 18390_AT | 987 | 18806_S_AT | 1041 | 19230_AT |
| 934 | 18439_S_AT | 988 | 18823_S_AT | 1042 | 19232_S_AT |
| 935 | 18465_S_AT | 989 | 18829_AT | 1043 | 19285_AT |
| 936 | 18487_AT | 990 | 18835_AT | 1044 | 19326_AT |
| 937 | 18508_S_AT | 991 | 18844_AT | 1045 | 19332_AT |
| 938 | 18512_AT | 992 | 18859_AT | 1046 | 19346_AT |
| 939 | 18543_AT | 993 | 18864_AT | 1047 | 19347_AT |
| 940 | 18544_AT | 994 | 18866_AT | 1048 | 19362_AT |
| 941 | 18552_AT | 995 | 18880_AT | 1049 | 19363_AT |
| 942 | 18555_AT | 996 | 18883_G_AT | 1050 | 19364_AT |
| 943 | 18556_AT | 997 | 18885_AT | 1051 | 19367_AT |
| 944 | 18561_AT | 998 | 18886_AT | 1052 | 19373_AT |
| 945 | 18567_AT | 999 | 18887_AT | 1053 | 19381_AT |
| 946 | 18573_AT | 1000 | 18888_AT | 1054 | 19382_AT |

TABLE 3 (cont)

| | | | | | |
|------|------------|------|------------|------|------------|
| 1055 | 19384_AT | 1109 | 19833_S_AT | 1163 | 20093_I_AT |
| 1056 | 19401_AT | 1110 | 19834_AT | 1164 | 20099_AT |
| 1057 | 19406_AT | 1111 | 19836_AT | 1165 | 20100_AT |
| 1058 | 19413_AT | 1112 | 19841_AT | 1166 | 20113_S_AT |
| 1059 | 19416_AT | 1113 | 19845_G_AT | 1167 | 20117_AT |
| 1060 | 19426_S_AT | 1114 | 19854_AT | 1168 | 20123_AT |
| 1061 | 19439_AT | 1115 | 19855_AT | 1169 | 20127_S_AT |
| 1062 | 19441_S_AT | 1116 | 19866_AT | 1170 | 20129_AT |
| 1063 | 19442_AT | 1117 | 19867_AT | 1171 | 20150_AT |
| 1064 | 19448_S_AT | 1118 | 19870_S_AT | 1172 | 20154_AT |
| 1065 | 19454_AT | 1119 | 19871_AT | 1173 | 20156_AT |
| 1066 | 19462_S_AT | 1120 | 19872_AT | 1174 | 20165_AT |
| 1067 | 19464_AT | 1121 | 19875_S_AT | 1175 | 20173_AT |
| 1068 | 19470_AT | 1122 | 19876_AT | 1176 | 20178_S_AT |
| 1069 | 19483_AT | 1123 | 19879_S_AT | 1177 | 20183_AT |
| 1070 | 19489_S_AT | 1124 | 19881_AT | 1178 | 20188_AT |
| 1071 | 19513_AT | 1125 | 19897_S_AT | 1179 | 20189_AT |
| 1072 | 19548_AT | 1126 | 19903_AT | 1180 | 20197_AT |
| 1073 | 19562_AT | 1127 | 19905_AT | 1181 | 20210_G_AT |
| 1074 | 19563_S_AT | 1128 | 19906_AT | 1182 | 20213_AT |
| 1075 | 19567_AT | 1129 | 19907_AT | 1183 | 20229_AT |
| 1076 | 19581_AT | 1130 | 19910_AT | 1184 | 20232_S_AT |
| 1077 | 19589_S_AT | 1131 | 19913_AT | 1185 | 20255_AT |
| 1078 | 19595_S_AT | 1132 | 19920_S_AT | 1186 | 20257_AT |
| 1079 | 19606_AT | 1133 | 19932_AT | 1187 | 20262_AT |
| 1080 | 19623_AT | 1134 | 19939_AT | 1188 | 20275_AT |
| 1081 | 19624_AT | 1135 | 19945_AT | 1189 | 20278_S_AT |
| 1082 | 19627_S_AT | 1136 | 19947_AT | 1190 | 20282_S_AT |
| 1083 | 19636_AT | 1137 | 19951_AT | 1191 | 20284_AT |
| 1084 | 19652_AT | 1138 | 19956_AT | 1192 | 20293_AT |
| 1085 | 19655_AT | 1139 | 19962_AT | 1193 | 20294_AT |
| 1086 | 19657_S_AT | 1140 | 19963_AT | 1194 | 20312_S_AT |
| 1087 | 19658_AT | 1141 | 19969_AT | 1195 | 20315_I_AT |
| 1088 | 19660_AT | 1142 | 19970_S_AT | 1196 | 20330_S_AT |
| 1089 | 19665_S_AT | 1143 | 19971_AT | 1197 | 20331_AT |
| 1090 | 19667_AT | 1144 | 19972_AT | 1198 | 20350_S_AT |
| 1091 | 19671_AT | 1145 | 19981_AT | 1199 | 20354_S_AT |
| 1092 | 19677_AT | 1146 | 19990_AT | 1200 | 20355_AT |
| 1093 | 19686_AT | 1147 | 19996_AT | 1201 | 20360_AT |
| 1094 | 19689_AT | 1148 | 20003_S_AT | 1202 | 20363_AT |
| 1095 | 19690_S_AT | 1149 | 20009_S_AT | 1203 | 20369_S_AT |
| 1096 | 19695_AT | 1150 | 20013_AT | 1204 | 20378_G_AT |
| 1097 | 19698_AT | 1151 | 20018_AT | 1205 | 20383_AT |
| 1098 | 19700_S_AT | 1152 | 20024_S_AT | 1206 | 20384_AT |
| 1099 | 19708_AT | 1153 | 20027_AT | 1207 | 20387_AT |
| 1100 | 19717_AT | 1154 | 20045_AT | 1208 | 20393_AT |
| 1101 | 19726_S_AT | 1155 | 20047_AT | 1209 | 20396_AT |
| 1102 | 19744_AT | 1156 | 20048_AT | 1210 | 20399_AT |
| 1103 | 19752_S_AT | 1157 | 20050_AT | 1211 | 20409_G_AT |
| 1104 | 19759_AT | 1158 | 20051_AT | 1212 | 20412_S_AT |
| 1105 | 19782_AT | 1159 | 20058_AT | 1213 | 20413_AT |
| 1106 | 19803_S_AT | 1160 | 20067_AT | 1214 | 20439_AT |
| 1107 | 19828_AT | 1161 | 20068_AT | 1215 | 20440_AT |
| 1108 | 19831_I_AT | 1162 | 20069_AT | 1216 | 20444_AT |

TABLE 3 (cont)

| | |
|------|------------|
| 1217 | 20445_AT |
| 1218 | 20449_AT |
| 1219 | 20456_AT |
| 1220 | 20462_AT |
| 1221 | 20471_AT |
| 1222 | 20474_AT |
| 1223 | 20495_S_AT |
| 1224 | 20499_AT |
| 1225 | 20501_AT |
| 1226 | 20511_AT |
| 1227 | 20515_S_AT |
| 1228 | 20516_AT |
| 1229 | 20517_AT |
| 1230 | 20518_AT |
| 1231 | 20520_S_AT |
| 1232 | 20536_S_AT |
| 1233 | 20538_S_AT |
| 1234 | 20539_S_AT |
| 1235 | 20558_AT |
| 1236 | 20561_AT |
| 1237 | 20567_AT |
| 1238 | 20571_AT |
| 1239 | 20582_S_AT |
| 1240 | 20586_I_AT |
| 1241 | 20590_AT |
| 1242 | 20592_AT |
| 1243 | 20594_AT |
| 1244 | 20608_S_AT |
| 1245 | 20612_S_AT |
| 1246 | 20616_AT |
| 1247 | 20620_G_AT |
| 1248 | 20637_AT |
| 1249 | 20643_AT |
| 1250 | 20649_AT |
| 1251 | 20651_AT |
| 1252 | 20654_S_AT |
| 1253 | 20670_AT |
| 1254 | 20684_AT |
| 1255 | 20685_AT |
| 1256 | 20693_AT |
| 1257 | 20701_S_AT |
| 1258 | 20704_AT |
| 1259 | 20705_AT |
| 1260 | 20715_AT |
| 1261 | 20719_AT |

TABLE 4: 2X UP IN COLD, ONLY

| | | | | | |
|------------|------------|------------|------------|------------|------------|
| 11997_at | 12688_at | 13274_s_at | 14145_at | 15083_at | 15639_s_at |
| 11998_at | 12701_i_at | 13278_f_at | 14170_at | 15084_at | 15641_s_at |
| 12018_at | 12702_at | 13279_s_at | 14186_at | 15096_at | 15660_s_at |
| 12031_at | 12719_f_at | 13285_s_at | 14196_at | 15101_s_at | 15665_s_at |
| 12047_at | 12726_f_at | 13288_s_at | 14227_at | 15105_s_at | 15687_f_at |
| 12051_at | 12736_f_at | 13292_s_at | 14234_at | 15112_s_at | 15694_s_at |
| 12053_at | 12754_g_at | 13297_s_at | 14250_r_at | 15115_f_at | 15712_s_at |
| 12060_at | 12762_r_at | 13299_s_at | 14270_at | 15116_f_at | 15783_s_at |
| 12072_at | 12766_at | 13332_at | 14298_g_at | 15122_s_at | 15808_at |
| 12074_at | 12767_at | 13351_at | 14303_s_at | 15126_s_at | 15837_at |
| 12102_at | 12768_at | 13352_at | 14312_at | 15131_s_at | 15850_at |
| 12112_at | 12773_at | 13422_at | 14339_at | 15132_s_at | 15862_at |
| 12117_at | 12788_at | 13435_at | 14388_at | 15137_s_at | 15868_at |
| 12130_at | 12802_at | 13461_s_at | 14393_at | 15144_s_at | 15878_at |
| 12145_s_at | 12860_s_at | 13467_at | 14511_at | 15148_s_at | 15901_at |
| 12151_at | 12861_s_at | 13488_at | 14525_s_at | 15153_s_at | 15912_at |
| 12163_at | 12879_s_at | 13495_s_at | 14527_at | 15159_s_at | 15920_i_at |
| 12175_at | 12891_at | 13539_i_at | 14534_s_at | 15160_s_at | 15941_at |
| 12187_at | 12914_s_at | 13542_at | 14554_at | 15166_s_at | 15945_at |
| 12195_at | 12927_s_at | 13575_at | 14566_at | 15174_f_at | 15960_at |
| 12219_at | 12947_at | 13577_s_at | 14579_at | 15197_s_at | 15990_at |
| 12256_at | 12956_i_at | 13617_at | 14591_at | 15270_at | 16001_at |
| 12269_s_at | 12966_s_at | 13634_s_at | 14595_at | 15319_at | 16009_s_at |
| 12307_at | 12974_at | 13656_at | 14600_at | 15325_at | 16010_s_at |
| 12315_at | 12987_s_at | 13671_s_at | 14631_s_at | 15337_at | 16034_at |
| 12336_at | 12994_s_at | 13691_s_at | 14635_s_at | 15341_at | 16036_i_at |
| 12349_s_at | 12998_at | 13700_at | 14679_s_at | 15343_at | 16039_s_at |
| 12353_at | 13002_at | 13704_s_at | 14691_at | 15355_s_at | 16040_at |
| 12359_s_at | 13018_at | 13709_s_at | 14697_g_at | 15367_at | 16042_s_at |
| 12390_at | 13023_at | 13715_at | 14709_at | 15379_at | 16047_at |
| 12395_s_at | 13046_g_at | 13785_at | 14711_s_at | 15381_at | 16049_s_at |
| 12431_at | 13054_at | 13803_at | 14728_s_at | 15410_at | 16051_s_at |
| 12436_at | 13086_r_at | 13812_s_at | 14731_s_at | 15417_s_at | 16062_s_at |
| 12443_s_at | 13087_at | 13825_s_at | 14797_s_at | 15422_at | 16079_s_at |
| 12447_at | 13100_at | 13850_i_at | 14809_at | 15433_at | 16087_s_at |
| 12452_at | 13109_at | 13904_s_at | 14843_at | 15451_at | 16090_s_at |
| 12477_at | 13119_at | 13908_s_at | 14847_at | 15452_at | 16117_s_at |
| 12503_at | 13120_at | 13927_at | 14872_at | 15453_s_at | 16118_s_at |
| 12516_s_at | 13128_at | 13971_s_at | 14886_at | 15472_at | 16137_s_at |
| 12532_at | 13134_s_at | 13985_s_at | 14896_at | 15489_at | 16155_s_at |
| 12544_at | 13140_at | 14013_at | 14897_at | 15490_at | 16162_s_at |
| 12561_at | 13143_at | 14019_at | 14900_at | 15503_at | 16184_at |
| 12602_at | 13167_at | 14021_r_at | 14956_s_at | 15510_r_at | 16192_at |
| 12610_at | 13172_s_at | 14028_at | 14958_at | 15517_s_at | 16222_at |
| 12631_at | 13178_at | 14048_at | 14965_at | 15518_at | 16244_at |
| 12647_s_at | 13179_at | 14058_at | 14984_s_at | 15544_at | 16250_at |
| 12650_at | 13181_at | 14059_at | 15004_at | 15588_s_at | 16260_at |
| 12656_at | 13187_i_at | 14064_at | 15010_at | 15600_s_at | 16286_at |
| 12674_at | 13209_s_at | 14073_at | 15036_r_at | 15605_s_at | 16296_at |
| 12675_s_at | 13219_s_at | 14105_at | 15040_g_at | 15613_s_at | 16297_at |
| 12676_s_at | 13221_at | 14106_at | 15046_s_at | 15614_s_at | 16342_at |
| 12681_s_at | 13243_r_at | 14126_s_at | 15057_at | 15616_s_at | 16367_i_at |
| 12686_s_at | 13260_s_at | 14140_at | 15073_at | 15633_s_at | 16411_s_at |

TABLE 4 (cont): 2X UP IN COLD, ONLY

| | | | | | |
|------------|------------|------------|------------|------------|------------|
| 16442_s_at | 17077_s_at | 17978_s_at | 18885_at | 19689_at | 20412_s_at |
| 16465_at | 17102_s_at | 17999_at | 18887_at | 19698_at | 20413_at |
| 16466_s_at | 17109_s_at | 18001_at | 18888_at | 19700_s_at | 20432_at |
| 16468_at | 17113_s_at | 18004_at | 18889_at | 19707_s_at | 20433_at |
| 16486_at | 17123_s_at | 18012_s_at | 18901_at | 19708_at | 20456_at |
| 16487_at | 17128_s_at | 18040_s_at | 18907_s_at | 19713_at | 20462_at |
| 16488_at | 17129_s_at | 18176_at | 18917_i_at | 19718_at | 20471_at |
| 16489_at | 17132_at | 18194_i_at | 18939_at | 19744_at | 20511_at |
| 16496_s_at | 17166_at | 18197_at | 18947_i_at | 19836_at | 20515_s_at |
| 16499_at | 17206_at | 18198_at | 18949_at | 19839_at | 20517_at |
| 16511_at | 17237_at | 18213_at | 18954_at | 19840_s_at | 20518_at |
| 16517_at | 17300_at | 18219_at | 18959_at | 19845_g_at | 20529_at |
| 16538_s_at | 17319_at | 18222_at | 18974_at | 19854_at | 20536_s_at |
| 16554_s_at | 17322_at | 18231_at | 18976_at | 19855_at | 20538_s_at |
| 16571_s_at | 17332_s_at | 18232_at | 18980_at | 19860_at | 20539_s_at |
| 16576_f_at | 17381_at | 18241_at | 18989_s_at | 19866_at | 20576_at |
| 16595_s_at | 17388_at | 18269_s_at | 19019_i_at | 19871_at | 20582_s_at |
| 16605_s_at | 17392_s_at | 18272_at | 19049_at | 19875_s_at | 20586_i_at |
| 16610_s_at | 17408_at | 18282_at | 19083_at | 19879_s_at | 20608_s_at |
| 16620_s_at | 17424_at | 18298_at | 19130_at | 19881_at | 20649_at |
| 16621_s_at | 17429_s_at | 18316_at | 19156_s_at | 19913_at | 20651_at |
| 16635_s_at | 17457_at | 18317_at | 19178_at | 19939_at | 20684_at |
| 16636_s_at | 17458_at | 18331_s_at | 19190_g_at | 19945_at | 20685_at |
| 16638_s_at | 17466_s_at | 18347_s_at | 19199_at | 19947_at | 20699_at |
| 16650_s_at | 17477_s_at | 18383_at | 19202_at | 19951_at | 20705_at |
| 16672_at | 17482_s_at | 18390_at | 19209_s_at | 19956_at | 20715_at |
| 16673_at | 17538_s_at | 18455_at | 19211_at | 19971_at | |
| 16687_s_at | 17546_s_at | 18465_s_at | 19218_at | 19976_at | |
| 16747_at | 17562_at | 18544_at | 19229_at | 19998_at | |
| 16753_at | 17581_g_at | 18555_at | 19322_at | 20003_s_at | |
| 16768_at | 17627_at | 18556_at | 19326_at | 20015_at | |
| 16805_s_at | 17631_at | 18560_at | 19359_s_at | 20027_at | |
| 16807_at | 17632_at | 18561_at | 19367_at | 20051_at | |
| 16845_at | 17645_s_at | 18571_at | 19384_at | 20068_at | |
| 16847_at | 17672_at | 18588_at | 19389_at | 20093_i_at | |
| 16896_s_at | 17675_at | 18597_at | 19397_at | 20117_at | |
| 16899_at | 17677_at | 18601_s_at | 19406_at | 20150_at | |
| 16902_at | 17693_at | 18611_at | 19426_s_at | 20156_at | |
| 16911_at | 17732_at | 18623_at | 19441_s_at | 20165_at | |
| 16914_s_at | 17743_at | 18635_at | 19442_at | 20257_at | |
| 16943_s_at | 17748_at | 18659_at | 19470_at | 20262_at | |
| 16956_at | 17775_at | 18660_s_at | 19489_s_at | 20275_at | |
| 16996_s_at | 17782_at | 18673_at | 19562_at | 20282_s_at | |
| 17010_s_at | 17841_at | 18694_s_at | 19577_at | 20288_g_at | |
| 17016_s_at | 17852_g_at | 18705_at | 19589_s_at | 20293_at | |
| 17032_s_at | 17900_s_at | 18708_at | 19597_s_at | 20315_i_at | |
| 17033_s_at | 17901_at | 18738_f_at | 19611_s_at | 20330_s_at | |
| 17043_s_at | 17911_at | 18750_f_at | 19624_at | 20360_at | |
| 17050_s_at | 17921_s_at | 18778_at | 19657_s_at | 20363_at | |
| 17055_s_at | 17922_at | 18829_at | 19667_at | 20369_s_at | |
| 17068_s_at | 17933_at | 18835_at | 19671_at | 20384_at | |
| 17071_s_at | 17967_at | 18866_at | 19677_at | 20393_at | |
| 17075_s_at | 17970_i_at | 18875_s_at | 19686_at | 20396_at | |

TABLE 5: 2X UP COLD 3 HR, ONLY

| | | | | |
|------------|------------|------------|------------|------------|
| 12117_at | 13671_s_at | 15453_s_at | 17237_at | 19624_at |
| 12145_s_at | 13691_s_at | 15489_at | 17319_at | 19657_s_at |
| 12151_at | 13785_at | 15518_at | 17392_s_at | 19667_at |
| 12163_at | 13803_at | 15588_s_at | 17429_s_at | 19845_g_at |
| 12187_at | 13825_s_at | 15613_s_at | 17477_s_at | 19855_at |
| 12256_at | 13904_s_at | 15614_s_at | 17538_s_at | 19866_at |
| 12315_at | 14013_at | 15616_s_at | 17581_g_at | 19945_at |
| 12349_s_at | 14021_r_at | 15639_s_at | 17627_at | 19951_at |
| 12353_at | 14028_at | 15641_s_at | 17672_at | 19998_at |
| 12359_s_at | 14064_at | 15660_s_at | 17693_at | 20003_s_at |
| 12544_at | 14126_s_at | 15687_f_at | 17782_at | 20015_at |
| 12602_at | 14145_at | 15694_s_at | 17841_at | 20051_at |
| 12610_at | 14170_at | 15862_at | 17900_s_at | 20093_i_at |
| 12676_s_at | 14196_at | 15868_at | 17933_at | 20117_at |
| 12686_s_at | 14250_r_at | 15878_at | 17978_s_at | 20288_g_at |
| 12701_i_at | 14298_g_at | 15901_at | 18001_at | 20360_at |
| 12702_at | 14303_s_at | 16034_at | 18012_s_at | 20369_s_at |
| 12719_f_at | 14339_at | 16039_s_at | 18198_at | 20384_at |
| 12736_f_at | 14527_at | 16040_at | 18219_at | 20462_at |
| 12754_g_at | 14534_s_at | 16042_s_at | 18241_at | 20471_at |
| 12766_at | 14554_at | 16047_at | 18269_s_at | 20515_s_at |
| 12767_at | 14595_at | 16062_s_at | 18272_at | 20538_s_at |
| 12768_at | 14635_s_at | 16087_s_at | 18282_at | 20576_at |
| 12773_at | 14679_s_at | 16117_s_at | 18298_at | 20608_s_at |
| 12788_at | 14691_at | 16118_s_at | 18383_at | 20651_at |
| 12879_s_at | 14697_g_at | 16162_s_at | 18556_at | 20685_at |
| 12891_at | 14709_at | 16184_at | 18588_at | 20705_at |
| 12947_at | 14728_s_at | 16222_at | 18601_s_at | |
| 12966_s_at | 14809_at | 16250_at | 18611_at | |
| 12974_at | 14896_at | 16411_s_at | 18694_s_at | |
| 12994_s_at | 14965_at | 16442_s_at | 18708_at | |
| 13002_at | 14984_s_at | 16465_at | 18738_f_at | |
| 13100_at | 15046_s_at | 16486_at | 18778_at | |
| 13140_at | 15083_at | 16488_at | 18829_at | |
| 13167_at | 15096_at | 16489_at | 18835_at | |
| 13172_s_at | 15105_s_at | 16517_at | 18866_at | |
| 13179_at | 15115_f_at | 16571_s_at | 18875_s_at | |
| 13187_i_at | 15116_f_at | 16605_s_at | 18888_at | |
| 13219_s_at | 15122_s_at | 16610_s_at | 18907_s_at | |
| 13260_s_at | 15126_s_at | 16620_s_at | 18917_i_at | |
| 13278_f_at | 15131_s_at | 16636_s_at | 18939_at | |
| 13279_s_at | 15132_s_at | 16650_s_at | 18974_at | |
| 13285_s_at | 15137_s_at | 16805_s_at | 19190_g_at | |
| 13288_s_at | 15153_s_at | 16845_at | 19199_at | |
| 13292_s_at | 15159_s_at | 16899_at | 19202_at | |
| 13297_s_at | 15160_s_at | 16914_s_at | 19211_at | |
| 13351_at | 15197_s_at | 16943_s_at | 19384_at | |
| 13352_at | 15355_s_at | 16996_s_at | 19406_at | |
| 13435_at | 15379_at | 17010_s_at | 19426_s_at | |
| 13467_at | 15417_s_at | 17043_s_at | 19442_at | |
| 13488_at | 15422_at | 17068_s_at | 19470_at | |
| 13495_s_at | 15451_at | 17109_s_at | 19577_at | |
| 13656_at | 15452_at | 17128_s_at | 19597_s_at | |

TABLE 6: 2X DOWN COLD, ONLY

| | | | | | |
|------------|------------|------------|------------|------------|------------|
| 11991_g_at | 12450_s_at | 12881_s_at | 13151_g_at | 13621_g_at | 14056_at |
| 11992_at | 12474_at | 12889_s_at | 13160_at | 13623_r_at | 14057_at |
| 12001_at | 12491_at | 12901_s_at | 13161_at | 13629_s_at | 14061_at |
| 12006_s_at | 12497_at | 12902_at | 13162_at | 13631_at | 14067_at |
| 12007_at | 12500_s_at | 12904_s_at | 13165_at | 13635_at | 14068_s_at |
| 12009_at | 12515_at | 12905_s_at | 13166_at | 13646_at | 14072_at |
| 12022_at | 12521_at | 12908_s_at | 13185_at | 13650_at | 14074_at |
| 12023_s_at | 12523_at | 12910_s_at | 13193_s_at | 13652_at | 14075_at |
| 12026_at | 12526_at | 12916_s_at | 13211_s_at | 13653_at | 14083_at |
| 12037_at | 12527_at | 12923_s_at | 13213_s_at | 13655_at | 14084_at |
| 12052_at | 12534_g_at | 12926_s_at | 13219_s_at | 13657_at | 14089_at |
| 12125_at | 12549_s_at | 12931_s_at | 13233_at | 13666_s_at | 14095_s_at |
| 12143_at | 12550_s_at | 12937_r_at | 13236_s_at | 13667_s_at | 14096_at |
| 12149_at | 12552_at | 12941_g_at | 13239_s_at | 13669_s_at | 14100_at |
| 12156_at | 12555_s_at | 12942_at | 13241_s_at | 13670_s_at | 14101_at |
| 12166_i_at | 12556_at | 12949_at | 13254_s_at | 13672_s_at | 14103_at |
| 12167_at | 12575_s_at | 12953_at | 13266_s_at | 13678_s_at | 14121_at |
| 12169_i_at | 12576_s_at | 12958_at | 13273_s_at | 13679_s_at | 14129_s_at |
| 12176_at | 12581_s_at | 12959_at | 13275_f_at | 13688_s_at | 14133_s_at |
| 12179_at | 12587_at | 12966_s_at | 13276_s_at | 13690_s_at | 14143_at |
| 12196_at | 12597_at | 12975_at | 13278_f_at | 13691_s_at | 14148_at |
| 12198_at | 12606_at | 12983_at | 13280_s_at | 13692_s_at | 14162_at |
| 12200_at | 12609_at | 12984_at | 13285_s_at | 13714_at | 14194_at |
| 12202_at | 12646_at | 13002_at | 13296_s_at | 13724_at | 14208_at |
| 12212_at | 12649_at | 13009_i_at | 13347_at | 13748_at | 14217_at |
| 12214_g_at | 12653_at | 13011_at | 13355_at | 13751_at | 14223_at |
| 12224_at | 12661_at | 13014_at | 13361_at | 13759_at | 14235_at |
| 12226_at | 12666_at | 13024_at | 13404_at | 13767_at | 14236_at |
| 12233_at | 12678_i_at | 13034_s_at | 13406_at | 13789_at | 14251_f_at |
| 12240_at | 12705_f_at | 13041_s_at | 13459_at | 13876_at | 14252_f_at |
| 12253_g_at | 12736_f_at | 13048_s_at | 13460_at | 13880_s_at | 14285_at |
| 12270_at | 12737_f_at | 13067_s_at | 13464_at | 13883_at | 14301_s_at |
| 12278_at | 12758_at | 13068_at | 13523_s_at | 13887_s_at | 14316_at |
| 12284_at | 12760_g_at | 13073_s_at | 13529_at | 13895_at | 14366_at |
| 12287_s_at | 12764_f_at | 13078_s_at | 13541_at | 13906_s_at | 14369_at |
| 12293_at | 12765_at | 13079_at | 13545_s_at | 13919_at | 14392_g_at |
| 12294_s_at | 12772_at | 13081_s_at | 13550_at | 13923_at | 14421_at |
| 12300_at | 12776_at | 13083_at | 13552_at | 13932_at | 14431_at |
| 12312_at | 12784_at | 13090_at | 13556_i_at | 13935_at | 14436_at |
| 12315_at | 12793_at | 13092_s_at | 13561_at | 13940_at | 14448_at |
| 12324_i_at | 12794_at | 13098_at | 13563_s_at | 13949_s_at | 14450_at |
| 12331_s_at | 12795_at | 13103_at | 13567_at | 13954_g_at | 14454_at |
| 12344_at | 12809_g_at | 13105_at | 13568_at | 13973_at | 14459_at |
| 12348_at | 12812_at | 13107_s_at | 13571_at | 13983_at | 14478_at |
| 12353_at | 12815_at | 13108_at | 13576_at | 13989_at | 14482_at |
| 12372_at | 12816_at | 13114_at | 13583_at | 14010_at | 14485_at |
| 12374_i_at | 12818_at | 13118_f_at | 13598_at | 14014_at | 14492_s_at |
| 12405_at | 12824_s_at | 13123_at | 13601_at | 14015_s_at | 14505_at |
| 12408_at | 12828_s_at | 13124_at | 13604_at | 14016_s_at | 14510_at |
| 12410_g_at | 12842_s_at | 13133_s_at | 13613_at | 14025_s_at | 14517_at |
| 12419_at | 12846_s_at | 13135_s_at | 13616_s_at | 14027_at | 14519_at |
| 12427_at | 12858_at | 13139_at | 13618_s_at | 14030_at | 14534_s_at |
| 12438_at | 12869_s_at | 13146_s_at | 13619_at | 14044_at | 14538_r_at |

TABLE 6 (cont): 2X DOWN COLD, ONLY

| | | | | | |
|------------|------------|------------|------------|------------|------------|
| 14558_at | 15047_at | 15512_at | 15940_at | 16357_at | 16894_at |
| 14559_s_at | 15054_at | 15514_at | 15948_s_at | 16380_at | 16899_at |
| 14572_at | 15056_at | 15515_r_at | 15956_at | 16382_at | 16920_at |
| 14584_at | 15058_s_at | 15529_at | 15976_at | 16385_s_at | 16921_at |
| 14587_at | 15063_at | 15534_f_at | 15978_at | 16393_s_at | 16924_s_at |
| 14595_at | 15066_at | 15538_at | 15986_s_at | 16402_s_at | 16926_s_at |
| 14602_at | 15081_at | 15541_at | 16004_s_at | 16417_s_at | 16931_s_at |
| 14603_at | 15091_at | 15543_at | 16015_at | 16442_s_at | 16934_s_at |
| 14605_at | 15097_s_at | 15551_at | 16017_at | 16446_at | 16937_at |
| 14620_s_at | 15102_s_at | 15574_s_at | 16019_at | 16448_g_at | 16938_at |
| 14626_s_at | 15107_s_at | 15576_s_at | 16024_at | 16453_s_at | 16942_at |
| 14630_s_at | 15118_s_at | 15577_s_at | 16031_at | 16457_s_at | 16949_s_at |
| 14637_s_at | 15127_s_at | 15578_s_at | 16055_s_at | 16470_s_at | 16950_s_at |
| 14640_s_at | 15130_s_at | 15581_s_at | 16059_s_at | 16481_s_at | 16952_s_at |
| 14642_f_at | 15132_s_at | 15583_s_at | 16065_s_at | 16510_at | 16962_s_at |
| 14650_s_at | 15133_s_at | 15591_s_at | 16066_s_at | 16512_s_at | 16965_s_at |
| 14654_s_at | 15139_s_at | 15595_s_at | 16069_s_at | 16514_at | 16970_s_at |
| 14667_s_at | 15143_s_at | 15602_f_at | 16074_s_at | 16516_at | 16977_at |
| 14668_s_at | 15146_s_at | 15606_s_at | 16076_s_at | 16523_s_at | 16984_at |
| 14669_s_at | 15150_s_at | 15608_s_at | 16077_s_at | 16526_at | 16989_at |
| 14672_s_at | 15161_s_at | 15616_s_at | 16084_s_at | 16528_at | 16993_at |
| 14673_s_at | 15162_s_at | 15618_s_at | 16089_s_at | 16531_s_at | 16997_at |
| 14675_s_at | 15167_s_at | 15620_s_at | 16102_s_at | 16535_s_at | 17000_at |
| 14679_s_at | 15170_s_at | 15627_s_at | 16103_s_at | 16537_s_at | 17005_at |
| 14681_g_at | 15171_s_at | 15634_s_at | 16105_s_at | 16543_s_at | 17010_s_at |
| 14682_i_at | 15178_s_at | 15637_s_at | 16108_s_at | 16544_s_at | 17017_s_at |
| 14689_at | 15182_s_at | 15642_s_at | 16112_s_at | 16550_s_at | 17031_s_at |
| 14701_s_at | 15185_s_at | 15643_s_at | 16117_s_at | 16559_s_at | 17040_s_at |
| 14703_at | 15188_s_at | 15646_s_at | 16118_s_at | 16567_s_at | 17053_s_at |
| 14712_s_at | 15193_s_at | 15651_f_at | 16125_s_at | 16577_s_at | 17056_s_at |
| 14713_s_at | 15196_s_at | 15652_s_at | 16127_s_at | 16579_s_at | 17063_s_at |
| 14715_s_at | 15201_f_at | 15667_s_at | 16134_s_at | 16580_s_at | 17070_s_at |
| 14734_s_at | 15206_s_at | 15668_s_at | 16136_s_at | 16583_s_at | 17074_s_at |
| 14781_at | 15207_s_at | 15670_s_at | 16138_s_at | 16584_s_at | 17084_s_at |
| 14800_at | 15213_s_at | 15671_s_at | 16140_s_at | 16593_s_at | 17085_s_at |
| 14856_s_at | 15243_at | 15675_s_at | 16143_s_at | 16598_s_at | 17087_s_at |
| 14882_at | 15256_at | 15679_s_at | 16144_s_at | 16603_s_at | 17092_s_at |
| 14908_at | 15348_at | 15685_s_at | 16145_s_at | 16604_s_at | 17095_s_at |
| 14912_at | 15350_at | 15688_s_at | 16148_s_at | 16611_s_at | 17096_s_at |
| 14914_at | 15372_at | 15689_s_at | 16151_s_at | 16614_s_at | 17097_s_at |
| 14924_at | 15383_at | 15692_s_at | 16158_f_at | 16617_s_at | 17103_s_at |
| 14942_at | 15384_at | 15775_at | 16160_f_at | 16618_s_at | 17105_s_at |
| 14945_at | 15385_at | 15776_at | 16168_s_at | 16620_s_at | 17110_s_at |
| 14955_at | 15387_at | 15845_at | 16169_s_at | 16631_s_at | 17115_s_at |
| 14957_s_at | 15406_at | 15848_at | 16171_s_at | 16634_s_at | 17116_s_at |
| 14974_at | 15423_at | 15858_at | 16172_s_at | 16639_s_at | 17119_s_at |
| 14980_at | 15431_at | 15866_s_at | 16222_at | 16640_s_at | 17122_s_at |
| 14981_at | 15464_at | 15894_at | 16232_s_at | 16652_s_at | 17207_at |
| 14995_at | 15468_at | 15900_at | 16242_at | 16654_at | 17215_at |
| 15009_at | 15471_at | 15901_at | 16288_at | 16777_at | 17247_at |
| 15018_at | 15475_s_at | 15902_at | 16294_s_at | 16784_at | 17254_at |
| 15024_at | 15485_at | 15913_at | 16325_at | 16811_at | 17286_at |
| 15026_at | 15505_at | 15928_at | 16346_s_at | 16893_at | 17288_s_at |

TABLE 6 (cont): 2X DOWN COLD, ONLY

| | | | | | |
|------------|------------|------------|------------|------------|------------|
| 17292_at | 17910_at | 18337_s_at | 18823_s_at | 19382_at | 19897_s_at |
| 17303_s_at | 17916_at | 18339_at | 18844_at | 19401_at | 19903_at |
| 17305_at | 17917_s_at | 18365_s_at | 18859_at | 19402_at | 19905_at |
| 17318_at | 17918_at | 18402_at | 18864_at | 19406_at | 19906_at |
| 17323_at | 17926_s_at | 18439_s_at | 18880_at | 19413_at | 19907_at |
| 17374_at | 17935_at | 18487_at | 18883_g_at | 19416_at | 19910_at |
| 17405_at | 17956_i_at | 18508_s_at | 18886_at | 19429_at | 19920_s_at |
| 17415_at | 17961_at | 18512_at | 18892_s_at | 19432_s_at | 19932_at |
| 17418_s_at | 17966_at | 18543_at | 18909_s_at | 19439_at | 19951_at |
| 17420_at | 17978_s_at | 18552_at | 18911_at | 19448_s_at | 19962_at |
| 17423_s_at | 17986_s_at | 18567_at | 18913_s_at | 19454_at | 19963_at |
| 17426_at | 17993_at | 18573_at | 18916_s_at | 19462_s_at | 19969_at |
| 17427_at | 17998_s_at | 18580_at | 18921_g_at | 19464_at | 19970_s_at |
| 17430_s_at | 18003_at | 18581_at | 18950_at | 19469_at | 19972_at |
| 17431_at | 18005_at | 18584_at | 18951_s_at | 19483_at | 19981_at |
| 17439_g_at | 18010_s_at | 18587_s_at | 18956_at | 19484_s_at | 19990_at |
| 17442_i_at | 18013_r_at | 18590_at | 18966_at | 19513_at | 19996_at |
| 17449_s_at | 18023_s_at | 18591_at | 18972_at | 19548_at | 19999_s_at |
| 17462_s_at | 18029_g_at | 18592_s_at | 18994_at | 19563_s_at | 20009_s_at |
| 17463_at | 18030_i_at | 18600_at | 19030_at | 19567_at | 20013_at |
| 17465_at | 18045_at | 18601_s_at | 19039_at | 19581_at | 20017_at |
| 17475_at | 18046_s_at | 18607_s_at | 19068_i_at | 19595_s_at | 20018_at |
| 17479_at | 18059_i_at | 18610_s_at | 19108_at | 19606_at | 20024_s_at |
| 17495_s_at | 18064_r_at | 18611_at | 19115_at | 19623_at | 20045_at |
| 17508_s_at | 18065_r_at | 18616_at | 19117_s_at | 19627_s_at | 20047_at |
| 17522_s_at | 18074_at | 18622_g_at | 19122_at | 19636_at | 20048_at |
| 17523_s_at | 18076_s_at | 18628_at | 19125_s_at | 19641_at | 20050_at |
| 17529_s_at | 18077_at | 18631_at | 19127_at | 19652_at | 20051_at |
| 17537_s_at | 18078_at | 18636_at | 19135_at | 19655_at | 20058_at |
| 17539_s_at | 18081_at | 18638_at | 19144_at | 19658_at | 20067_at |
| 17543_s_at | 18083_r_at | 18652_at | 19157_s_at | 19660_at | 20069_at |
| 17555_s_at | 18085_r_at | 18657_at | 19158_at | 19665_s_at | 20099_at |
| 17557_s_at | 18091_at | 18667_at | 19177_at | 19667_at | 20100_at |
| 17560_s_at | 18154_s_at | 18675_at | 19192_at | 19690_s_at | 20113_s_at |
| 17564_s_at | 18165_at | 18684_at | 19198_at | 19695_at | 20123_at |
| 17565_s_at | 18174_at | 18686_s_at | 19222_at | 19717_at | 20127_s_at |
| 17568_at | 18221_at | 18688_s_at | 19226_g_at | 19726_s_at | 20129_at |
| 17570_g_at | 18226_s_at | 18693_s_at | 19227_at | 19752_s_at | 20133_i_at |
| 17573_at | 18230_at | 18698_s_at | 19230_at | 19759_at | 20152_at |
| 17577_g_at | 18237_at | 18706_s_at | 19232_s_at | 19782_at | 20154_at |
| 17578_at | 18255_at | 18707_at | 19263_at | 19789_s_at | 20173_at |
| 17579_s_at | 18257_at | 18726_s_at | 19285_at | 19803_s_at | 20178_s_at |
| 17585_s_at | 18258_s_at | 18727_at | 19332_at | 19828_at | 20183_at |
| 17596_at | 18274_s_at | 18732_i_at | 19346_at | 19831_i_at | 20188_at |
| 17600_s_at | 18275_at | 18735_s_at | 19347_at | 19833_s_at | 20189_at |
| 17823_s_at | 18278_at | 18736_at | 19361_s_at | 19834_at | 20197_at |
| 17840_s_at | 18283_at | 18738_f_at | 19362_at | 19835_at | 20200_at |
| 17849_s_at | 18290_at | 18747_f_at | 19363_at | 19841_at | 20210_g_at |
| 17857_at | 18291_at | 18754_at | 19364_at | 19867_at | 20213_at |
| 17865_at | 18299_s_at | 18782_at | 19365_s_at | 19870_s_at | 20229_at |
| 17882_at | 18300_at | 18789_at | 19373_at | 19871_at | 20232_s_at |
| 17885_at | 18306_at | 18806_s_at | 19379_at | 19872_at | 20255_at |
| 17902_s_at | 18327_s_at | 18814_at | 19381_at | 19876_at | 20278_s_at |

TABLE 6 (cont): 2X DOWN COLD, ONLY

| | |
|------------|------------|
| 20284_at | 20693_at |
| 20288_g_at | 20701_s_at |
| 20294_at | 20704_at |
| 20312_s_at | 20707_s_at |
| 20331_at | 20719_at |
| 20335_s_at | |
| 20350_s_at | |
| 20354_s_at | |
| 20355_at | |
| 20369_s_at | |
| 20378_g_at | |
| 20383_at | |
| 20385_s_at | |
| 20387_at | |
| 20399_at | |
| 20409_g_at | |
| 20420_at | |
| 20429_s_at | |
| 20439_at | |
| 20440_at | |
| 20444_at | |
| 20445_at | |
| 20449_at | |
| 20474_at | |
| 20480_s_at | |
| 20495_s_at | |
| 20499_at | |
| 20501_at | |
| 20516_at | |
| 20520_s_at | |
| 20530_s_at | |
| 20538_s_at | |
| 20547_at | |
| 20558_at | |
| 20561_at | |
| 20567_at | |
| 20571_at | |
| 20590_at | |
| 20592_at | |
| 20594_at | |
| 20608_s_at | |
| 20612_s_at | |
| 20616_at | |
| 20620_g_at | |
| 20635_s_at | |
| 20637_at | |
| 20643_at | |
| 20654_s_at | |
| 20670_at | |
| 20674_s_at | |
| 20684_at | |
| 20685_at | |
| 20689_s_at | |

TABLE 7

SALINE STRESS RESPONSIVE SEQUENCES

| SEQ AFFYMETRIX ID NO: | ID NO: | SEQ AFFYMETRIX ID NO: | ID NO: | SEQ AFFYMETRIX ID NO: | ID NO: |
|--------------------------|------------|--------------------------|------------|--------------------------|------------|
| 2227 | 12011_S_AT | 2275 | 13993_S_AT | 2324 | 15965_AT |
| 2228 | 12153_AT | 2276 | 14000_AT | 2325 | 15969_S_AT |
| 2229 | 12180_AT | 2277 | 14003_AT | 2326 | 15975_S_AT |
| 2230 | 12186_AT | 2278 | 14032_AT | 2327 | 15995_S_AT |
| 2231 | 12216_AT | 2279 | 14043_AT | 2328 | 15998_S_AT |
| 2232 | 12265_AT | 2280 | 14070_AT | | 18090_S_AT |
| 2233 | 12335_AT | 2281 | 14267_AT | 2329 | 16028_AT |
| 2234 | 12449_S_AT | 2282 | 14269_AT | 2330 | 16050_AT |
| 2235 | 12470_AT | 2283 | 14418_AT | 2331 | 16060_S_AT |
| 2236 | 12479_AT | 2284 | 14427_AT | 2332 | 16067_S_AT |
| 2237 | 12487_AT | 2285 | 14501_AT | 2333 | 16072_S_AT |
| 2238 | 12493_G_AT | 2286 | 14544_AT | 2334 | 16088_F_AT |
| 2239 | 12562_AT | 2287 | 14546_S_AT | 2335 | 16273_AT |
| 2240 | 12685_AT | 2288 | 14570_AT | 2336 | 16314_AT |
| 2241 | 12704_F_AT | 2289 | 14596_AT | 2337 | 16413_S_AT |
| 2242 | 12709_F_AT | 2290 | 14729_S_AT | 2338 | 16414_AT |
| 2243 | 12734_F_AT | 2291 | 14874_AT | 2339 | 16426_AT |
| 2244 | 12739_S_AT | 2292 | 14888_AT | 2340 | 16436_AT |
| 2245 | 12750_S_AT | 2293 | 14951_AT | 2341 | 16455_AT |
| 2246 | 12761_S_AT | 2294 | 14952_AT | 2342 | 16502_AT |
| 2247 | 12813_AT | 2295 | 14959_AT | 2343 | 16548_S_AT |
| 2248 | 12845_S_AT | 2296 | 14979_AT | 2344 | 16568_S_AT |
| 2249 | 12946_AT | 2297 | 15006_AT | 2345 | 16582_S_AT |
| 2250 | 13003_S_AT | 2298 | 15042_AT | 2346 | 16589_S_AT |
| 2251 | 13052_S_AT | 2299 | 15049_AT | 2347 | 16594_S_AT |
| 2252 | 13094_AT | 2300 | 15062_AT | 2348 | 16613_S_AT |
| 2253 | 13142_AT | 2301 | 15108_S_AT | 2349 | 16651_S_AT |
| 2254 | 13172_S_AT | 2302 | 15147_S_AT | 2350 | 16668_AT |
| | 17880_S_AT | 2303 | 15175_S_AT | 2351 | 16820_AT |
| 2255 | 13198_I_AT | 2304 | 15176_S_AT | 2352 | 16987_S_AT |
| 2256 | 13209_S_AT | 2305 | 15186_S_AT | 2353 | 16995_AT |
| | 16165_S_AT | | 18696_S_AT | 2354 | 17039_S_AT |
| 2257 | 13229_S_AT | 2306 | 15192_S_AT | 2355 | 17273_AT |
| 2258 | 13253_F_AT | 2307 | 15208_S_AT | 2356 | 17278_AT |
| 2259 | 13344_S_AT | 2308 | 15324_AT | 2357 | 17433_AT |
| 2260 | 13370_AT | 2309 | 15371_AT | 2358 | 17467_AT |
| 2261 | 13387_AT | 2310 | 15424_AT | 2359 | 17566_AT |
| 2262 | 13408_S_AT | 2311 | 15463_AT | 2360 | 17595_S_AT |
| 2263 | 13429_AT | 2312 | 15465_AT | 2361 | 17744_S_AT |
| 2264 | 13472_AT | 2313 | 15497_S_AT | 2362 | 17758_AT |
| 2265 | 13526_AT | 2314 | 15589_S_AT | 2363 | 17864_AT |
| 2266 | 13569_AT | 2315 | 15636_S_AT | 2364 | 17868_AT |
| 2267 | 13614_AT | 2316 | 15663_S_AT | 2365 | 17876_AT |
| 2268 | 13686_S_AT | 2317 | 15770_AT | 2366 | 17894_AT |
| 2269 | 13718_AT | 2318 | 15792_AT | 2367 | 17942_S_AT |
| 2270 | 13719_AT | 2319 | 15855_AT | 2368 | 18008_R_AT |
| 2271 | 13902_AT | 2320 | 15860_AT | 2369 | 18027_AT |
| 2272 | 13918_AT | 2321 | 15891_AT | 2370 | 18053_S_AT |
| 2273 | 13944_AT | 2322 | 15898_AT | 2371 | 18062_AT |
| 2274 | 13964_AT | 2323 | 15909_AT | 2372 | 18082_AT |

TABLE 7 (cont)

| | | | |
|------|------------|------|------------|
| 2373 | 18121_S_AT | 2426 | 20648_S_AT |
| 2374 | 18240_S_AT | 2427 | 20668_AT |
| 2375 | 18248_S_AT | | |
| 2376 | 18264_AT | | |
| 2377 | 18276_AT | | |
| 2378 | 18287_AT | | |
| 2379 | 18310_AT | | |
| 2380 | 18367_S_AT | | |
| 2381 | 18506_AT | | |
| 2382 | 18605_S_AT | | |
| 2383 | 18618_S_AT | | |
| 2384 | 18626_AT | | |
| 2385 | 18666_S_AT | | |
| 2386 | 18834_AT | | |
| 2387 | 18847_AT | | |
| 2388 | 18896_AT | | |
| 2389 | 18899_S_AT | | |
| 2390 | 18973_AT | | |
| 2391 | 18983_S_AT | | |
| 2392 | 18988_AT | | |
| 2393 | 18998_S_AT | | |
| 2394 | 19065_AT | | |
| 2395 | 19119_I_AT | | |
| | 19121_AT | | |
| 2396 | 19207_AT | | |
| 2397 | 19220_AT | | |
| 2398 | 19284_AT | | |
| 2399 | 19315_AT | | |
| 2400 | 19348_AT | | |
| 2401 | 19403_S_AT | | |
| 2402 | 19437_S_AT | | |
| 2403 | 19502_AT | | |
| 2404 | 19609_AT | | |
| 2405 | 19645_AT | | |
| 2406 | 19742_AT | | |
| 2407 | 19863_AT | | |
| 2408 | 19873_AT | | |
| 2409 | 19891_AT | | |
| 2410 | 20004_S_AT | | |
| 2411 | 20053_AT | | |
| 2412 | 20138_AT | | |
| 2413 | 20193_AT | | |
| 2414 | 20199_AT | | |
| 2415 | 20220_AT | | |
| 2416 | 20239_G_AT | | |
| 2417 | 20297_AT | | |
| 2418 | 20324_S_AT | | |
| 2419 | 20353_AT | | |
| 2420 | 20362_AT | | |
| 2421 | 20389_AT | | |
| 2422 | 20546_AT | | |
| 2423 | 20600_AT | | |
| 2424 | 20623_AT | | |
| 2425 | 20629_AT | | |

TABLE 8: 2X UP IN SALT, ONLY

| | | | | |
|------------|------------|------------|------------|------------|
| 12037_at | 14570_at | 16190_at | 18506_at | 20648_s_at |
| 12137_at | 14578_s_at | 16196_at | 18605_s_at | 20678_at |
| 12153_at | 14596_at | 16273_at | 18626_at | 20686_at |
| 12186_at | 14646_s_at | 16314_at | 18666_s_at | 20707_s_at |
| 12216_at | 14662_f_at | 16413_s_at | 18747_f_at | |
| 12268_at | 14668_s_at | 16414_at | 18782_at | |
| 12449_s_at | 14729_s_at | 16417_s_at | 18834_at | |
| 12470_at | 14874_at | 16455_at | 18847_at | |
| 12476_at | 14888_at | 16548_s_at | 18913_s_at | |
| 12487_at | 14918_at | 16582_s_at | 18973_at | |
| 12493_g_at | 14952_at | 16589_s_at | 18988_at | |
| 12609_at | 14959_at | 16594_s_at | 18998_s_at | |
| 12685_at | 14986_at | 16613_s_at | 19065_at | |
| 12704_f_at | 15006_at | 16651_s_at | 19068_i_at | |
| 12709_f_at | 15042_at | 16668_at | 19123_at | |
| 12734_f_at | 15047_at | 16690_g_at | 19177_at | |
| 12739_s_at | 15062_at | 16762_at | 19220_at | |
| 12750_s_at | 15063_at | 16820_at | 19284_at | |
| 12761_s_at | 15108_s_at | 16873_i_at | 19288_at | |
| 12819_at | 15133_s_at | 16987_s_at | 19315_at | |
| 12845_s_at | 15147_s_at | 16989_at | 19437_s_at | |
| 12946_at | 15170_s_at | 16995_at | 19484_s_at | |
| 13142_at | 15175_s_at | 17039_s_at | 19502_at | |
| 13198_i_at | 15182_s_at | 17040_s_at | 19503_at | |
| 13229_s_at | 15190_s_at | 17400_s_at | 19592_at | |
| 13275_f_at | 15192_s_at | 17425_s_at | 19645_at | |
| 13344_s_at | 15324_at | 17433_at | 19742_at | |
| 13370_at | 15392_at | 17467_at | 19835_at | |
| 13408_s_at | 15424_at | 17490_s_at | 19873_at | |
| 13464_at | 15467_at | 17529_s_at | 19891_at | |
| 13472_at | 15497_s_at | 17543_s_at | 19992_at | |
| 13526_at | 15581_s_at | 17566_at | 20004_s_at | |
| 13614_at | 15623_f_at | 17595_s_at | 20053_at | |
| 13652_at | 15636_s_at | 17744_s_at | 20133_i_at | |
| 13679_s_at | 15646_s_at | 17758_at | 20138_at | |
| 13751_at | 15670_s_at | 17855_at | 20190_at | |
| 13918_at | 15770_at | 17864_at | 20199_at | |
| 13919_at | 15775_at | 17876_at | 20200_at | |
| 13944_at | 15778_at | 18008_r_at | 20297_at | |
| 13964_at | 15792_at | 18013_r_at | 20324_s_at | |
| 13987_s_at | 15855_at | 18024_s_at | 20335_s_at | |
| 13993_s_at | 15891_at | 18027_at | 20353_at | |
| 14000_at | 15909_at | 18053_s_at | 20362_at | |
| 14032_at | 15923_at | 18078_at | 20385_s_at | |
| 14043_at | 15969_s_at | 18082_at | 20389_at | |
| 14052_at | 15975_s_at | 18090_s_at | 20402_s_at | |
| 14067_at | 15995_s_at | 18091_at | 20450_at | |
| 14070_at | 15998_s_at | 18121_s_at | 20468_at | |
| 14269_at | 16017_at | 18264_at | 20489_at | |
| 14285_at | 16050_at | 18276_at | 20546_at | |
| 14427_at | 16067_s_at | 18300_at | 20569_s_at | |
| 14501_at | 16072_s_at | 18367_s_at | 20600_at | |
| 14540_at | 16165_s_at | 18471_at | 20623_at | |

TABLE 9: 2X UP SALT, 3 HR ONLY

| | | | |
|------------|------------|------------|------------|
| 12037_at | 15042_at | 16987_s_at | 20004_s_at |
| 12137_at | 15047_at | 16989_at | 20053_at |
| 12153_at | 15062_at | 17039_s_at | 20133_i_at |
| 12186_at | 15063_at | 17040_s_at | 20138_at |
| 12216_at | 15108_s_at | 17425_s_at | 20190_at |
| 12268_at | 15133_s_at | 17433_at | 20199_at |
| 12470_at | 15147_s_at | 17490_s_at | 20200_at |
| 12476_at | 15170_s_at | 17543_s_at | 20220_at |
| 12487_at | 15175_s_at | 17744_s_at | 20362_at |
| 12493_g_at | 15182_s_at | 17864_at | 20385_s_at |
| 12609_at | 15190_s_at | 17876_at | 20389_at |
| 12685_at | 15192_s_at | 18008_r_at | 20489_at |
| 12704_f_at | 15324_at | 18013_r_at | 20546_at |
| 12709_f_at | 15424_at | 18024_s_at | 20623_at |
| 12734_f_at | 15467_at | 18027_at | 20648_s_at |
| 12739_s_at | 15497_s_at | 18053_s_at | 20678_at |
| 12750_s_at | 15623_f_at | 18078_at | 20707_s_at |
| 12819_at | 15636_s_at | 18082_at | |
| 12946_at | 15646_s_at | 18090_s_at | |
| 13142_at | 15670_s_at | 18091_at | |
| 13229_s_at | 15770_at | 18121_s_at | |
| 13275_f_at | 15775_at | 18264_at | |
| 13370_at | 15778_at | 18276_at | |
| 13408_s_at | 15792_at | 18367_s_at | |
| 13464_at | 15855_at | 18471_at | |
| 13472_at | 15891_at | 18506_at | |
| 13614_at | 15909_at | 18605_s_at | |
| 13652_at | 15923_at | 18626_at | |
| 13679_s_at | 15969_s_at | 18666_s_at | |
| 13918_at | 15975_s_at | 18747_f_at | |
| 13919_at | 15995_s_at | 18782_at | |
| 13944_at | 15998_s_at | 18834_at | |
| 13987_s_at | 16017_at | 18847_at | |
| 13993_s_at | 16050_at | 18913_s_at | |
| 14000_at | 16067_s_at | 18973_at | |
| 14032_at | 16072_s_at | 18988_at | |
| 14043_at | 16165_s_at | 19065_at | |
| 14052_at | 16196_at | 19068_i_at | |
| 14067_at | 16273_at | 19123_at | |
| 14269_at | 16314_at | 19177_at | |
| 14285_at | 16414_at | 19220_at | |
| 1450i_at | 16417_s_at | 19288_at | |
| 14540_at | 16455_at | 19315_at | |
| 14570_at | 16548_s_at | 19437_s_at | |
| 14596_at | 16582_s_at | 19484_s_at | |
| 14668_s_at | 16589_s_at | 19502_at | |
| 14729_s_at | 16594_s_at | 19503_at | |
| 14888_at | 16613_s_at | 19592_at | |
| 14918_at | 16651_s_at | 19645_at | |
| 14952_at | 16668_at | 19742_at | |
| 14959_at | 16762_at | 19835_at | |
| 14986_at | 16820_at | 19873_at | |
| 15006_at | 16873_i_at | 19891_at | |

TABLE 10: 2X DOWN SALT, ONLY

| | | |
|------------|------------|------------|
| 12011_s_at | 16046_s_at | 20239_g_at |
| 12180_at | 16060_s_at | 20433_at |
| 12265_at | 16088_f_at | 20629_at |
| 12335_at | 16150_s_at | 20668_at |
| 12479_at | 16166_s_at | |
| 12562_at | 16316_at | |
| 12656_at | 16340_at | |
| 12813_at | 16367_i_at | |
| 13003_s_at | 16426_at | |
| 13052_s_at | 16427_at | |
| 13094_at | 16436_at | |
| 13178_at | 16489_at | |
| 13253_f_at | 16502_at | |
| 13387_at | 16568_s_at | |
| 13429_at | 16638_s_at | |
| 13472_at | 16646_s_at | |
| 13569_at | 17273_at | |
| 13686_s_at | 17278_at | |
| 13718_at | 17567_at | |
| 13719_at | 17868_at | |
| 13902_at | 17880_s_at | |
| 14003_at | 17894_at | |
| 14144_at | 17901_at | |
| 14267_at | 17942_s_at | |
| 14418_at | 17960_at | |
| 14544_at | 17999_at | |
| 14546_s_at | 18062_at | |
| 14636_s_at | 18240_s_at | |
| 14951_at | 18248_s_at | |
| 14956_s_at | 18267_at | |
| 14979_at | 18279_s_at | |
| 14990_at | 18287_at | |
| 15040_g_at | 18310_at | |
| 15049_at | 18351_s_at | |
| 15115_f_at | 18455_at | |
| 15137_s_at | 18560_at | |
| 15148_s_at | 18571_at | |
| 15176_s_at | 18618_s_at | |
| 15208_s_at | 18896_at | |
| 15371_at | 18899_s_at | |
| 15453_s_at | 18967_s_at | |
| 15463_at | 18983_s_at | |
| 15465_at | 19119_i_at | |
| 15589_s_at | 19121_at | |
| 15663_s_at | 19207_at | |
| 15860_at | 19348_at | |
| 15898_at | 19403_s_at | |
| 15931_at | 19609_at | |
| 15965_at | 19742_at | |
| 15970_s_at | 19826_at | |
| 15972_s_at | 19863_at | |
| 16005_s_at | 19883_at | |
| 16028_at | 20193_at | |

TABLE 11

OSMOTIC STRESS RESPONSIVE SEQUENCES

| SEQ AFFYMETRIX ID NO: | ID NO: | SEQ AFFYMETRIX ID NO: | ID NO: | SEQ AFFYMETRIX ID NO: | ID NO: |
|--------------------------|------------|--------------------------|------------|--------------------------|------------|
| 2428 | 11994_AT | 2475 | 13995_AT | 2523 | 17037_S_AT |
| 2429 | 12028_AT | 2476 | 14062_AT | 2524 | 17054_S_AT |
| 2430 | 12033_AT | 2477 | 14118_I_AT | 2525 | 17257_S_AT |
| 2431 | 12039_AT | 2478 | 14141_AT | | 18725_S_AT |
| 2432 | 12068_AT | 2479 | 14310_AT | 2526 | 17270_AT |
| 2433 | 12096_AT | 2480 | 14354_AT | 2527 | 17275_I_AT |
| 2434 | 12110_AT | 2481 | 14476_AT | 2528 | 17376_AT |
| 2435 | 12114_AT | 2482 | 14513_S_AT | 2529 | 17378_AT |
| 2436 | 12135_AT | 2483 | 14568_S_AT | 2530 | 17468_AT |
| 2437 | 12139_AT | 2484 | 14604_AT | 2531 | 17481_AT |
| 2438 | 12189_AT | 2485 | 14634_S_AT | 2532 | 17511_S_AT |
| 2439 | 12191_AT | 2486 | 14660_S_AT | 2533 | 17519_S_AT |
| 2440 | 12211_AT | 2487 | 14666_S_AT | 2534 | 17815_S_AT |
| 2441 | 12223_S_AT | 2488 | 14686_S_AT | 2535 | 17897_AT |
| 2442 | 12366_S_AT | | 17464_AT | 2536 | 17923_S_AT |
| | 12869_S_AT | 2489 | 14726_S_AT | 2537 | 17934_AT |
| 2443 | 12381_AT | 2490 | 14848_S_AT | 2538 | 17937_S_AT |
| 2444 | 12406_S_AT | 2491 | 14873_AT | 2539 | 17944_AT |
| 2445 | 12412_AT | 2492 | 14883_AT | 2540 | 17958_AT |
| 2446 | 12453_AT | 2493 | 15082_AT | 2541 | 18216_AT |
| 2447 | 12571_S_AT | 2494 | 15121_S_AT | 2542 | 18227_AT |
| 2448 | 12662_AT | | 16014_S_AT | 2543 | 18284_AT |
| 2449 | 12746_I_AT | 2495 | 15168_S_AT | 2544 | 18301_S_AT |
| 2450 | 12774_AT | 2496 | 15271_AT | 2545 | 18312_S_AT |
| 2451 | 12787_AT | 2497 | 15338_AT | 2546 | 18326_S_AT |
| 2452 | 12847_AT | 2498 | 15418_AT | 2547 | 18369_AT |
| 2453 | 12848_AT | 2499 | 15429_AT | 2548 | 18411_AT |
| 2454 | 12895_AT | 2500 | 15548_AT | 2549 | 18533_AT |
| 2455 | 12911_S_AT | 2501 | 15666_S_AT | 2550 | 18576_S_AT |
| 2456 | 12920_AT | 2502 | 15672_S_AT | 2551 | 18599_AT |
| | 12921_S_AT | 2503 | 15680_S_AT | 2552 | 18640_AT |
| 2457 | 13027_AT | 2504 | 15867_AT | 2553 | 18672_S_AT |
| 2458 | 13059_AT | 2505 | 15918_AT | 2554 | 18720_S_AT |
| 2459 | 13075_I_AT | 2506 | 15999_S_AT | 2555 | 18768_AT |
| 2460 | 13180_S_AT | 2507 | 16303_AT | 2556 | 18877_AT |
| 2461 | 13255_I_AT | 2508 | 16363_AT | 2557 | 18942_AT |
| 2462 | 13270_AT | 2509 | 16440_S_AT | 2558 | 18945_AT |
| | 18167_S_AT | 2510 | 16458_S_AT | 2559 | 18960_AT |
| 2463 | 13283_S_AT | 2511 | 16475_AT | 2560 | 18965_AT |
| 2464 | 13382_AT | 2512 | 16513_S_AT | 2561 | 19060_AT |
| 2465 | 13386_S_AT | 2513 | 16529_AT | 2562 | 19164_G_AT |
| 2466 | 13433_AT | 2514 | 16547_S_AT | 2563 | 19266_AT |
| 2467 | 13482_AT | 2515 | 16553_F_AT | 2564 | 19366_S_AT |
| 2468 | 13732_AT | 2516 | 16563_S_AT | 2565 | 19369_AT |
| 2469 | 13733_I_AT | 2517 | 16629_S_AT | 2566 | 19371_AT |
| 2470 | 13842_AT | 2518 | 16797_AT | 2567 | 19386_AT |
| 2471 | 13860_S_AT | 2519 | 16814_AT | 2568 | 19412_AT |
| 2472 | 13868_AT | 2520 | 16832_AT | 2569 | 19427_S_AT |
| 2473 | 13901_AT | 2521 | 16976_S_AT | 2570 | 19622_G_AT |
| 2474 | 13933_AT | 2522 | 17007_AT | 2571 | 19681_AT |

TABLE 11 (cont)

| | |
|------|------------|
| 2572 | 19819_S_AT |
| 2573 | 19961_S_AT |
| 2574 | 20002_AT |
| 2575 | 20034_I_AT |
| 2576 | 20062_AT |
| 2577 | 20136_AT |
| 2578 | 20223_AT |
| 2579 | 20235_I_AT |
| 2580 | 20401_AT |
| 2581 | 20407_AT |
| 2582 | 20470_AT |
| 2583 | 20626_AT |
| 2584 | 20631_S_AT |
| 2585 | 20647_AT |

TABLE 12: 2X UP IN MANNITOL, ONLY

| | |
|------------|------------|
| 12039_at | 16832_at |
| 12068_at | 16993_at |
| 12139_at | 17037_s_at |
| 12212_at | 17054_s_at |
| 12278_at | 17083_s_at |
| 12366_s_at | 17097_s_at |
| 12453_at | 17119_s_at |
| 12556_at | 17270_at |
| 12575_s_at | 17305_at |
| 12746_i_at | 17376_at |
| 12848_at | 17378_at |
| 12869_s_at | 17449_s_at |
| 12920_at | 17481_at |
| 12921_s_at | 17533_s_at |
| 13041_s_at | 17832_s_at |
| 13059_at | 17923_s_at |
| 13241_s_at | 17944_at |
| 13255_i_at | 18059_i_at |
| 13270_at | 18216_at |
| 13382_at | 18230_at |
| 13406_at | 18255_at |
| 13433_at | 18284_at |
| 13550_at | 18301_s_at |
| 13672_s_at | 18312_s_at |
| 13716_at | 18326_s_at |
| 13842_at | 18599_at |
| 13933_at | 18672_s_at |
| 13995_at | 18720_s_at |
| 14062_at | 18768_at |
| 14075_at | 18814_at |
| 14162_at | 18877_at |
| 14208_at | 18921_g_at |
| 14217_at | 18960_at |
| 14235_at | 19060_at |
| 14310_at | 19182_at |
| 14431_at | 19192_at |
| 14513_s_at | 19266_at |
| 14584_at | 19369_at |
| 14604_at | 19386_at |
| 14673_s_at | 19402_at |
| 14856_s_at | 19412_at |
| 15207_s_at | 19432_s_at |
| 15338_at | 19469_at |
| 15406_at | 19622_g_at |
| 15418_at | 19819_s_at |
| 15591_s_at | 19826_at |
| 15666_s_at | 20152_at |
| 15680_s_at | 20223_at |
| 15866_s_at | 20235_i_at |
| 15918_at | 20365_s_at |
| 16340_at | 20470_at |
| 16553_f_at | 20537_at |
| 16797_at | 20547_at |

TABLE 13: 2X UP IN MANNITOL, 3 HR ONLY

| | |
|------------|------------|
| 12039_at | 17449_s_at |
| 12068_at | 17481_at |
| 12139_at | 17533_s_at |
| 12212_at | 17923_s_at |
| 12278_at | 17944_at |
| 12366_s_at | 18059_i_at |
| 12453_at | 18216_at |
| 12556_at | 18230_at |
| 12575_s_at | 18255_at |
| 12746_i_at | 18301_s_at |
| 12848_at | 18312_s_at |
| 12869_s_at | 18326_s_at |
| 12920_at | 18599_at |
| 12921_s_at | 18720_s_at |
| 13041_s_at | 18768_at |
| 13059_at | 18814_at |
| 13241_s_at | 18877_at |
| 13382_at | 18921_g_at |
| 13406_at | 18960_at |
| 13433_at | 19060_at |
| 13550_at | 19192_at |
| 13672_s_at | 19266_at |
| 13933_at | 19369_at |
| 13995_at | 19386_at |
| 14062_at | 19402_at |
| 14075_at | 19412_at |
| 14162_at | 19432_s_at |
| 14217_at | 19469_at |
| 14310_at | 19622_g_at |
| 14431_at | 19819_s_at |
| 14513_s_at | 20152_at |
| 14584_at | 20223_at |
| 14604_at | 20235_i_at |
| 14673_s_at | 20365_s_at |
| 14856_s_at | 20470_at |
| 15207_s_at | 20537_at |
| 15338_at | |
| 15418_at | |
| 15591_s_at | |
| 15866_s_at | |
| 15918_at | |
| 16340_at | |
| 16553_f_at | |
| 16797_at | |
| 16832_at | |
| 17037_s_at | |
| 17054_s_at | |
| 17083_s_at | |
| 17097_s_at | |
| 17270_at | |
| 17305_at | |
| 17376_at | |
| 17378_at | |

TABLE 14: 2X DOWN IN MANNITOL, ONLY

| | | |
|------------|------------|------------|
| 12028_at | 14897_at | 17958_at |
| 12033_at | 14918_at | 18012_s_at |
| 12110_at | 15082_at | 18227_at |
| 12114_at | 15084_at | 18272_at |
| 12189_at | 15098_s_at | 18331_s_at |
| 12191_at | 15105_s_at | 18369_at |
| 12211_at | 15121_s_at | 18411_at |
| 12223_s_at | 15126_s_at | 18533_at |
| 12268_at | 15168_s_at | 18576_s_at |
| 12345_at | 15271_at | 18640_at |
| 12381_at | 15429_at | 18696_s_at |
| 12406_s_at | 15548_at | 18945_at |
| 12412_at | 15672_s_at | 18949_at |
| 12522_at | 15753_at | 18953_at |
| 12571_s_at | 15867_at | 18965_at |
| 12662_at | 15999_s_at | 19164_g_at |
| 12787_at | 16001_at | 19322_at |
| 12847_at | 16021_s_at | 19366_s_at |
| 12895_at | 16190_at | 19371_at |
| 12911_s_at | 16260_at | 19397_at |
| 13027_at | 16303_at | 19427_s_at |
| 13075_i_at | 16363_at | 19681_at |
| 13221_at | 16458_s_at | 19707_s_at |
| 13262_s_at | 16468_at | 19839_at |
| 13283_s_at | 16475_at | 19961_s_at |
| 13386_s_at | 16513_s_at | 19976_at |
| 13447_s_at | 16529_at | 19998_at |
| 13482_at | 16563_s_at | 20002_at |
| 13634_s_at | 16690_g_at | 20034_i_at |
| 13709_s_at | 16814_at | 20136_at |
| 13732_at | 16847_at | 20382_s_at |
| 13733_i_at | 16927_s_at | 20407_at |
| 13812_s_at | 16976_s_at | 20529_at |
| 13825_s_at | 17007_at | 20626_at |
| 13860_s_at | 17014_s_at | 20631_s_at |
| 13868_at | 17016_s_at | 20647_at |
| 13901_at | 17071_s_at | 20699_at |
| 14052_at | 17090_s_at | |
| 14224_at | 17257_s_at | |
| 14244_s_at | 17275_i_at | |
| 14254_s_at | 17424_at | |
| 14256_f_at | 17464_at | |
| 14354_at | 17468_at | |
| 14476_at | 17511_s_at | |
| 14568_s_at | 17519_s_at | |
| 14634_s_at | 17525_s_at | |
| 14646_s_at | 17645_s_at | |
| 14660_s_at | 17741_at | |
| 14686_s_at | 17815_s_at | |
| 14726_s_at | 17897_at | |
| 14848_s_at | 17899_at | |
| 14873_at | 17934_at | |
| 14883_at | 17937_s_at | |

TABLE 15

COLD & OSOMOTIC STRESS RESPONSIVE SEQUENCES

| SEQ AFFYMETRIX | | SEQ AFFYMETRIX | | SEQ AFFYMETRIX | |
|----------------|------------|----------------|------------|----------------|------------|
| ID NO: | ID NO: | ID NO: | ID NO: | ID NO: | ID NO: |
| 1699 | 12040_AT | 1742 | 13262_S_AT | 1787 | 14431_AT |
| 1700 | 12048_AT | 1743 | 13286_S_AT | 1788 | 14480_AT |
| 1701 | 12054_S_AT | 1744 | 13324_AT | 1789 | 14497_AT |
| 1702 | 12077_AT | 1745 | 13340_S_AT | 1790 | 14553_AT |
| 1703 | 12107_I_AT | 1746 | 13361_AT | 1791 | 14584_AT |
| 1704 | 12113_AT | 1747 | 13406_AT | 1792 | 14600_AT |
| 1705 | 12154_AT | 1748 | 13441_S_AT | 1793 | 14673_S_AT |
| 1706 | 12171_AT | 1749 | 13513_AT | | 19432_S_AT |
| 1707 | 12212_AT | 1750 | 13550_AT | 1794 | 14681_G_AT |
| 1708 | 12278_AT | 1751 | 13573_AT | 1795 | 14699_AT |
| 1709 | 12317_AT | 1752 | 13577_S_AT | 1796 | 14751_AT |
| 1710 | 12325_AT | 1753 | 13606_AT | 1797 | 14762_AT |
| 1711 | 12333_AT | 1754 | 13609_AT | 1798 | 14828_S_AT |
| 1712 | 12345_AT | 1755 | 13625_S_AT | 1799 | 14856_S_AT |
| 1713 | 12349_S_AT | 1756 | 13626_AT | 1800 | 14882_AT |
| | 14254_S_AT | 1757 | 13634_S_AT | 1801 | 14897_AT |
| | 14256_F_AT | 1758 | 13672_S_AT | 1802 | 14978_AT |
| 1714 | 12356_AT | | 18916_S_AT | 1803 | 14985_S_AT |
| 1715 | 12380_AT | 1759 | 13709_S_AT | 1804 | 15031_AT |
| 1716 | 12392_AT | 1760 | 13736_AT | 1805 | 15084_AT |
| 1717 | 12460_S_AT | 1761 | 13775_AT | 1806 | 15096_AT |
| 1718 | 12556_AT | 1762 | 13810_AT | 1807 | 15105_S_AT |
| 1719 | 12575_S_AT | 1763 | 13812_S_AT | 1808 | 15110_S_AT |
| 1720 | 12686_S_AT | 1764 | 13825_S_AT | 1809 | 15111_S_AT |
| 1721 | 12701_I_AT | 1765 | 14015_S_AT | 1810 | 15120_S_AT |
| 1722 | 12754_G_AT | | 14016_S_AT | 1811 | 15126_S_AT |
| 1723 | 12782_R_AT | 1766 | 14029_AT | 1812 | 15142_S_AT |
| 1724 | 12784_AT | 1767 | 14036_AT | 1813 | 15144_S_AT |
| 1725 | 12879_S_AT | 1768 | 14051_AT | 1814 | 15184_S_AT |
| 1726 | 12891_AT | 1769 | 14060_AT | 1815 | 15198_S_AT |
| | 16817_S_AT | 1770 | 14064_AT | 1816 | 15203_S_AT |
| 1727 | 12898_G_AT | 1771 | 14066_AT | 1817 | 15207_S_AT |
| 1728 | 12974_AT | 1772 | 14075_AT | 1818 | 15240_AT |
| 1729 | 12998_AT | 1773 | 14094_S_AT | 1819 | 15366_AT |
| 1730 | 13041_S_AT | | 19999_S_AT | 1820 | 15398_AT |
| 1731 | 13124_AT | 1774 | 14096_AT | 1821 | 15406_AT |
| 1732 | 13134_S_AT | 1775 | 14104_AT | 1822 | 15448_AT |
| 1733 | 13144_AT | 1776 | 14123_S_AT | 1823 | 15466_AT |
| 1734 | 13147_AT | 1777 | 14126_S_AT | 1824 | 15481_AT |
| 1735 | 13152_S_AT | 1778 | 14131_AT | 1825 | 15484_AT |
| 1736 | 13187_I_AT | 1779 | 14136_AT | 1826 | 15549_AT |
| | 16981_S_AT | 1780 | 14139_AT | 1827 | 15591_S_AT |
| 1737 | 13192_S_AT | | 14140_AT | 1828 | 15606_S_AT |
| | 17525_S_AT | 1781 | 14162_AT | 1829 | 15614_S_AT |
| 1738 | 13212_S_AT | | 14217_AT | | 16927_S_AT |
| | | 1782 | 14178_AT | 1830 | 15629_S_AT |
| 1739 | 13215_S_AT | 1783 | 14201_AT | 1831 | 15633_S_AT |
| | 16649_S_AT | 1784 | 14208_AT | 1832 | 15641_S_AT |
| 1740 | 13241_S_AT | 1785 | 14235_AT | | 18012_S_AT |
| 1741 | 13246_AT | 1786 | 14242_S_AT | 1833 | 15720_AT |

TABLE 15 (cont)

| | | | | | |
|------|------------|------|------------|------|------------|
| 1834 | 15815_S_AT | 1884 | 17452_G_AT | 1936 | 19469_AT |
| 1835 | 15817_AT | 1885 | 17540_S_AT | 1937 | 19473_AT |
| 1836 | 15837_AT | 1886 | 17552_S_AT | 1938 | 19597_S_AT |
| 1837 | 15841_AT | 1887 | 17571_AT | 1939 | 19710_S_AT |
| 1838 | 15866_S_AT | 1888 | 17589_AT | 1940 | 19830_AT |
| | 18255_AT | 1889 | 17641_G_AT | 1941 | 19839_AT |
| 1839 | 15872_AT | 1890 | 17741_AT | 1942 | 19840_S_AT |
| | 18331_S_AT | | 18098_AT | 1943 | 19853_AT |
| 1840 | 15892_AT | 1891 | 17766_AT | 1944 | 19860_AT |
| 1841 | 15933_AT | 1892 | 17873_S_AT | 1945 | 19880_AT |
| 1842 | 15947_AT | 1893 | 17904_AT | 1946 | 19889_AT |
| 1843 | 15959_S_AT | 1894 | 17920_S_AT | 1947 | 19898_AT |
| 1844 | 16001_AT | 1895 | 17925_AT | 1948 | 19914_AT |
| 1845 | 16052_AT | 1896 | 17943_AT | 1949 | 19924_AT |
| 1846 | 16161_S_AT | 1897 | 18059_I_AT | 1950 | 19949_AT |
| 1847 | 16204_AT | 1898 | 18230_AT | 1951 | 19976_AT |
| 1848 | 16232_S_AT | 1899 | 18263_AT | 1952 | 19998_AT |
| 1849 | 16252_AT | 1900 | 18272_AT | 1953 | 20030_AT |
| 1850 | 16260_AT | 1901 | 18540_AT | 1954 | 20151_AT |
| 1851 | 16266_AT | 1902 | 18608_AT | 1955 | 20152_AT |
| 1852 | 16299_AT | 1903 | 18647_AT | 1956 | 20187_AT |
| 1853 | 16365_AT | 1904 | 18662_S_AT | 1957 | 20214_I_AT |
| 1854 | 16468_AT | 1905 | 18664_AT | 1958 | 20269_AT |
| 1855 | 16477_AT | 1906 | 18695_S_AT | 1959 | 20271_AT |
| 1856 | 16491_AT | 1907 | 18704_AT | 1960 | 20273_AT |
| 1857 | 16523_S_AT | 1908 | 18814_AT | 1961 | 20299_AT |
| 1858 | 16566_S_AT | 1909 | 18907_S_AT | 1962 | 20323_AT |
| 1859 | 16570_S_AT | 1910 | 18921_G_AT | 1963 | 20429_S_AT |
| 1860 | 16688_AT | 1911 | 18924_AT | 1964 | 20457_AT |
| 1861 | 16840_AT | 1912 | 18949_AT | 1965 | 20480_S_AT |
| 1862 | 16847_AT | | 19707_S_AT | 1966 | 20529_AT |
| 1863 | 16893_AT | 1913 | 18995_AT | 1967 | 20547_AT |
| 1864 | 16896_S_AT | 1914 | 19017_AT | 1968 | 20555_S_AT |
| 1865 | 16898_S_AT | 1915 | 19034_AT | 1969 | 20699_AT |
| 1866 | 16912_S_AT | 1916 | 19063_AT | | |
| 1867 | 16980_AT | 1917 | 19142_AT | | |
| 1868 | 16993_AT | 1918 | 19158_AT | | |
| 1869 | 17008_AT | 1919 | 19180_AT | | |
| 1870 | 17012_S_AT | 1920 | 19187_AT | | |
| 1871 | 17014_S_AT | 1921 | 19192_AT | | |
| 1872 | 17016_S_AT | 1922 | 19195_AT | | |
| 1873 | 17032_S_AT | 1923 | 19199_AT | | |
| 1874 | 17050_S_AT | 1924 | 19231_AT | | |
| | 17051_S_AT | 1925 | 19263_AT | | |
| 1875 | 17071_S_AT | 1926 | 19308_AT | | |
| 1876 | 17090_S_AT | 1927 | 19322_AT | | |
| | 18690_S_AT | 1928 | 19365_S_AT | | |
| 1877 | 17097_S_AT | 1929 | 19372_AT | | |
| 1878 | 17104_S_AT | 1930 | 19389_AT | | |
| 1879 | 17119_S_AT | 1931 | 19392_AT | | |
| 1880 | 17160_AT | 1932 | 19397_AT | | |
| 1881 | 17305_AT | 1933 | 19400_AT | | |
| 1882 | 17424_AT | 1934 | 19402_AT | | |
| 1883 | 17449_S_AT | 1935 | 19458_AT | | |

TABLE 16: 2X UP IN MANNITOL & COLD, ONLY

| | |
|------------|------------|
| 12345_at | 17066_s_at |
| 12784_at | 17540_s_at |
| 13153_r_at | 17567_at |
| 13212_s_at | 17766_at |
| 13215_s_at | 17904_at |
| 13246_at | 17920_s_at |
| 13262_s_at | 17943_at |
| 13361_at | 18263_at |
| 13625_s_at | 18351_s_at |
| 13764_at | 18662_s_at |
| 13810_at | 18670_g_at |
| 14015_s_at | 18695_s_at |
| 14016_s_at | 18704_at |
| 14060_at | 18729_at |
| 14096_at | 18995_at |
| 14123_s_at | 19158_at |
| 14139_at | 19473_at |
| 14219_at | 19710_s_at |
| 14248_at | 19883_at |
| 14254_s_at | 19889_at |
| 14256_f_at | 20030_at |
| 14609_at | 20269_at |
| 14636_s_at | 20271_at |
| 14681_g_at | 20299_at |
| 14699_at | 20429_s_at |
| 14704_s_at | 20438_at |
| 14828_s_at | 20480_s_at |
| 14882_at | |
| 15110_s_at | |
| 15184_s_at | |
| 15448_at | |
| 15629_s_at | |
| 15720_at | |
| 15846_at | |
| 15947_at | |
| 16161_s_at | |
| 16365_at | |
| 16427_at | |
| 16566_s_at | |
| 16570_s_at | |
| 16649_s_at | |
| 16688_at | |
| 16712_at | |
| 16817_s_at | |
| 16840_at | |
| 16893_at | |
| 16912_s_at | |
| 16916_s_at | |
| 16927_s_at | |
| 16981_s_at | |
| 17012_s_at | |
| 17014_s_at | |
| 17051_s_at | |

TABLE 17: 2X DOWN COLD & MANNITOL, ONLY

| | | |
|------------|------------|------------|
| 12040_at | 14553_at | 17873_s_at |
| 12048_at | 14612_at | 17925_at |
| 12054_s_at | 14751_at | 18098_at |
| 12077_at | 14762_at | 18540_at |
| 12107_i_at | 14978_at | 18608_at |
| 12113_at | 14985_s_at | 18647_at |
| 12154_at | 15031_at | 18664_at |
| 12171_at | 15096_at | 18690_s_at |
| 12317_at | 15111_s_at | 18725_s_at |
| 12325_at | 15120_s_at | 18924_at |
| 12333_at | 15142_s_at | 19017_at |
| 12356_at | 15198_s_at | 19034_at |
| 12380_at | 15203_s_at | 19063_at |
| 12392_at | 15240_at | 19141_at |
| 12460_s_at | 15366_at | 19142_at |
| 12686_s_at | 15392_at | 19180_at |
| 12701_i_at | 15398_at | 19187_at |
| 12782_r_at | 15466_at | 19195_at |
| 12879_s_at | 15481_at | 19199_at |
| 12898_g_at | 15484_at | 19231_at |
| 12974_at | 15549_at | 19308_at |
| 12998_at | 15623_f_at | 19372_at |
| 13144_at | 15815_s_at | 19392_at |
| 13147_at | 15817_at | 19400_at |
| 13152_s_at | 15841_at | 19458_at |
| 13192_s_at | 15892_at | 19597_s_at |
| 13286_s_at | 15933_at | 19762_at |
| 13324_at | 15959_s_at | 19830_at |
| 13340_s_at | 16052_at | 19853_at |
| 13441_s_at | 16204_at | 19869_at |
| 13513_at | 16252_at | 19880_at |
| 13573_at | 16266_at | 19898_at |
| 13606_at | 16299_at | 19914_at |
| 13609_at | 16477_at | 19924_at |
| 13626_at | 16491_at | 19949_at |
| 13736_at | 16561_s_at | 20151_at |
| 13775_at | 16645_s_at | 20187_at |
| 14029_at | 16898_s_at | 20214_i_at |
| 14036_at | 16980_at | 20273_at |
| 14051_at | 17008_at | 20323_at |
| 14064_at | 17104_s_at | 20457_at |
| 14066_at | 17160_at | 20555_s_at |
| 14094_s_at | 17317_at | |
| 14104_at | 17400_s_at | |
| 14126_s_at | 17452_g_at | |
| 14131_at | 17477_s_at | |
| 14136_at | 17500_s_at | |
| 14178_at | 17552_s_at | |
| 14192_at | 17571_at | |
| 14201_at | 17572_s_at | |
| 14242_s_at | 17589_at | |
| 14480_at | 17641_g_at | |
| 14497_at | 17855_at | |

TABLE 18

COLD & SALINE STRESS RESPONSIVE SEQUENCES

| | | | | |
|-----------------|----------------|------------|----------------|------------|
| SEQ AFFYMETRIX | 2018 | 13544_AT | 2062 | 15047_AT |
| ID NO: ID NO: | 2019 | 13549_AT | 2063 | 15063_AT |
| 1970 12021_AT | 2020 | 13565_AT | 2064 | 15085_S_AT |
| 1971 12037_AT | SEQ AFFYMETRIX | | 2065 | 15123_S_AT |
| 1972 12094_AT | ID NO: ID NO: | | 2066 | 15133_S_AT |
| 1973 12098_AT | 2021 | 13580_AT | 2067 | 15137_S_AT |
| 1974 12128_AT | 2022 | 13588_AT | SEQ AFFYMETRIX | |
| 1975 12148_AT | 2023 | 13649_AT | ID NO: ID NO: | |
| 1976 12151_AT | 2024 | 13652_AT | 2068 | 15153_S_AT |
| 1977 12357_S_AT | 2025 | 13679_S_AT | 2069 | 15170_S_AT |
| 1978 12394_AT | 2026 | 13696_AT | 2070 | 15172_S_AT |
| 1979 12472_S_AT | 2027 | 13702_S_AT | 2071 | 15182_S_AT |
| 1980 12475_AT | 2028 | 13751_AT | 2072 | 15190_S_AT |
| 1981 12482_S_AT | 2029 | 13919_AT | 2073 | 15241_S_AT |
| 1982 12490_AT | 2030 | 13943_AT | 2074 | 15389_AT |
| 1983 12505_S_AT | 2031 | 13950_S_AT | 2075 | 15453_S_AT |
| 1984 12531_AT | 2032 | 14050_AT | 2076 | 15495_AT |
| 1985 12540_S_AT | 2033 | 14055_S_AT | 2077 | 15496_AT |
| 1986 12541_AT | | 16166_S_AT | 2078 | 15519_S_AT |
| 1987 12577_AT | 2034 | 14067_AT | 2079 | 15562_AT |
| 1988 12594_AT | 2035 | 14078_AT | 2080 | 15580_S_AT |
| 1989 12629_AT | 2036 | 14110_I_AT | 2081 | 15582_S_AT |
| 1990 12642_AT | 2037 | 14144_AT | 2082 | 15638_S_AT |
| 1991 12656_AT | 2038 | 14232_AT | | 18751_F_AT |
| 1992 12660_AT | 2039 | 14285_AT | 2083 | 15646_S_AT |
| 1993 12712_F_AT | 2040 | 14346_AT | 2084 | 15647_S_AT |
| 1994 12725_R_AT | 2041 | 14432_AT | 2085 | 15654_S_AT |
| 1995 12745_AT | 2042 | 14468_AT | 2086 | 15655_S_AT |
| 1996 12777_I_AT | 2043 | 14479_AT | 2087 | 15658_S_AT |
| 1997 12790_S_AT | 2044 | 14524_S_AT | 2088 | 15670_S_AT |
| 1998 12798_AT | 2045 | 14608_AT | 2089 | 15775_AT |
| 1999 12801_AT | 2046 | 14621_AT | 2090 | 15798_AT |
| 2000 12855_F_AT | 2047 | 14635_S_AT | 2091 | 15930_AT |
| 2001 12887_S_AT | | 17128_S_AT | 2092 | 15931_AT |
| 2002 12933_R_AT | 2048 | 14640_S_AT | 2093 | 15949_S_AT |
| 2003 12951_AT | 2049 | 14643_S_AT | 2094 | 16017_AT |
| 2004 13005_AT | 2050 | 14663_S_AT | 2095 | 16053_I_AT |
| 2005 13015_S_AT | 2051 | 14668_S_AT | 2096 | 16078_S_AT |
| 2006 13115_AT | 2052 | 14688_S_AT | 2097 | 16086_S_AT |
| 2007 13178_AT | | 18279_S_AT | 2098 | 16120_S_AT |
| 2008 13228_AT | 2053 | 14737_S_AT | 2099 | 16126_S_AT |
| 2009 13236_S_AT | 2054 | 14768_AT | 2100 | 16150_S_AT |
| 16646_S_AT | 2055 | 14875_AT | 2101 | 16159_S_AT |
| 2010 13266_S_AT | 2056 | 14911_S_AT | 2102 | 16230_AT |
| 15211_S_AT | | 17056_S_AT | 2103 | 16306_AT |
| 2011 13275_F_AT | 2057 | 14924_AT | 2104 | 16367_I_AT |
| 2012 13335_AT | 2058 | 14956_S_AT | 2105 | 16417_S_AT |
| 2013 13362_S_AT | | 15148_S_AT | | 18083_R_AT |
| 2014 13428_AT | | 18673_AT | 2106 | 16418_S_AT |
| 2015 13464_AT | 2059 | 14964_AT | 2107 | 16423_AT |
| 2016 13480_AT | 2060 | 15022_AT | 2108 | 16449_S_AT |
| 2017 13538_AT | 2061 | 15040_G_AT | 2109 | 16484_S_AT |

TABLE 18 (cont)

| | | | | | |
|------|------------|------|------------|------|------------|
| 2110 | 16489_AT | 2163 | 18455_AT | 2218 | 20565_AT |
| 2111 | 16565_S_AT | 2164 | 18459_AT | 2219 | 20570_AT |
| 2112 | 16596_S_AT | 2165 | 18571_AT | 2220 | 20576_AT |
| 2113 | 16600_S_AT | 2166 | 18604_AT | 2221 | 20577_AT |
| 2114 | 16603_S_AT | | 19181_S_AT | 2222 | 20609_AT |
| 2115 | 16638_S_AT | 2167 | 18644_AT | 2223 | 20646_AT |
| 2116 | 16642_S_AT | 2168 | 18745_F_AT | 2224 | 20672_AT |
| 2117 | 16763_AT | | 19611_S_AT | 2225 | 20707_S_AT |
| 2118 | 16914_S_AT | 2169 | 18782_AT | 2226 | 20720_AT |
| 2119 | 16968_AT | 2170 | 18881_AT | | |
| 2120 | 16983_AT | 2171 | 18904_S_AT | | |
| 2121 | 16989_AT | 2172 | 18914_S_AT | | |
| 2122 | 17002_AT | 2173 | 18963_AT | | |
| 2123 | 17015_S_AT | 2174 | 19068_I_AT | | |
| 2124 | 17040_S_AT | 2175 | 19078_AT | | |
| | 18913_S_AT | 2176 | 19171_AT | | |
| 2125 | 17232_AT | 2177 | 19177_AT | | |
| 2126 | 17380_AT | 2178 | 19394_AT | | |
| 2127 | 17394_S_AT | 2179 | 19411_AT | | |
| | 20640_S_AT | 2180 | 19415_AT | | |
| 2128 | 17398_AT | 2181 | 19466_S_AT | | |
| 2129 | 17448_AT | 2182 | 19484_S_AT | | |
| 2130 | 17485_S_AT | 2183 | 19549_S_AT | | |
| 2131 | 17490_S_AT | 2184 | 19592_AT | | |
| 2132 | 17499_S_AT | 2185 | 19633_AT | | |
| 2133 | 17505_S_AT | 2186 | 19641_AT | | |
| 2134 | 17516_S_AT | 2187 | 19669_AT | | |
| 2135 | 17529_S_AT | 2188 | 19672_AT | | |
| 2136 | 17543_S_AT | 2189 | 19684_AT | | |
| 2137 | 17593_R_AT | 2190 | 19692_AT | | |
| | 19858_S_AT | 2191 | 19746_AT | | |
| 2138 | 17609_AT | 2192 | 19835_AT | | |
| 2139 | 17698_AT | 2193 | 19848_S_AT | | |
| 2140 | 17836_AT | 2194 | 19892_AT | | |
| 2141 | 17886_AT | 2195 | 19904_AT | | |
| 2142 | 17896_AT | 2196 | 19936_AT | | |
| 2143 | 17901_AT | 2197 | 19974_S_AT | | |
| 2144 | 17902_S_AT | 2198 | 19994_AT | | |
| 2145 | 17913_S_AT | 2199 | 20005_S_AT | | |
| 2146 | 17924_AT | 2200 | 20022_AT | | |
| 2147 | 17954_S_AT | 2201 | 20032_AT | | |
| 2148 | 17960_AT | 2202 | 20044_AT | | |
| 2149 | 17991_G_AT | 2203 | 20049_AT | | |
| | 18967_S_AT | 2204 | 20081_AT | | |
| 2150 | 17999_AT | 2205 | 20133_I_AT | | |
| 2151 | 18057_I_AT | 2206 | 20155_S_AT | | |
| 2152 | 18078_AT | 2207 | 20163_S_AT | | |
| 2153 | 18091_AT | 2208 | 20200_AT | | |
| 2154 | 18168_S_AT | 2209 | 20296_S_AT | | |
| 2155 | 18252_AT | 2210 | 20336_AT | | |
| 2156 | 18267_AT | 2211 | 20341_AT | | |
| 2157 | 18300_AT | 2212 | 20372_AT | | |
| 2158 | 18308_I_AT | 2213 | 20385_S_AT | | |
| 2159 | 18328_AT | 2214 | 20433_AT | | |
| 2160 | 18354_AT | 2215 | 20489_AT | | |
| 2161 | 18402_AT | 2216 | 20525_AT | | |
| 2162 | 18416_AT | 2217 | 20543_AT | | |

TABLE 19: 2X UP IN SALT & COLD, ONLY

| | | |
|------------|------------|------------|
| 12004_at | 15495_at | 18745_f_at |
| 12098_at | 15496_at | 18904_s_at |
| 12148_at | 15519_s_at | 18914_s_at |
| 12251_at | 15580_s_at | 18929_s_at |
| 12357_s_at | 15582_s_at | 18946_at |
| 12394_at | 15776_at | 18963_at |
| 12457_at | 15798_at | 19078_at |
| 12505_s_at | 15910_at | 19137_at |
| 12522_at | 15931_at | 19141_at |
| 12541_at | 15937_at | 19411_at |
| 12594_at | 15949_s_at | 19641_at |
| 12606_at | 15972_s_at | 19672_at |
| 12697_at | 16048_at | 19684_at |
| 12745_at | 16086_s_at | 19692_at |
| 12781_at | 16120_s_at | 19746_at |
| 12798_at | 16126_s_at | 19762_at |
| 12855_f_at | 16150_s_at | 19869_at |
| 12945_at | 16159_s_at | 19894_at |
| 12951_at | 16230_at | 19904_at |
| 13005_at | 16306_at | 19936_at |
| 13015_s_at | 16418_s_at | 19994_at |
| 13115_at | 16423_at | 20005_s_at |
| 13146_s_at | 16449_s_at | 20031_at |
| 13335_at | 16565_s_at | 20044_at |
| 13447_s_at | 16603_s_at | 20382_s_at |
| 13480_at | 16763_at | 20406_g_at |
| 13544_at | 16968_at | 20421_at |
| 13549_at | 16983_at | 20525_at |
| 13580_at | 17002_at | 20543_at |
| 13649_at | 17015_s_at | 20565_at |
| 13943_at | 17019_s_at | 20570_at |
| 13950_s_at | 17078_s_at | 20640_s_at |
| 14110_i_at | 17232_at | 20646_at |
| 14144_at | 17317_at | 20720_at |
| 14224_at | 17394_s_at | |
| 14432_at | 17516_s_at | |
| 14468_at | 17585_s_at | |
| 14479_at | 17609_at | |
| 14524_s_at | 17698_at | |
| 14640_s_at | 17836_at | |
| 14643_s_at | 17896_at | |
| 14735_s_at | 17899_at | |
| 14737_s_at | 17902_s_at | |
| 14768_at | 17960_at | |
| 14784_at | 17963_at | |
| 14924_at | 18168_s_at | |
| 15064_at | 18252_at | |
| 15127_s_at | 18267_at | |
| 15186_s_at | 18308_i_at | |
| 15189_s_at | 18354_at | |
| 15255_at | 18402_at | |
| 15389_at | 18459_at | |
| 15482_at | 18484_at | |

(3)

TABLE 20: 2X DOWN IN COLD & SALT, ONLY

| | | |
|------------|------------|------------|
| 12021_at | 15123_s_at | 19394_at |
| 12094_at | 15153_s_at | 19415_at |
| 12128_at | 15172_s_at | 19466_s_at |
| 12151_at | 15190_s_at | 19549_s_at |
| 12332_s_at | 15211_s_at | 19592_at |
| 12472_s_at | 15241_s_at | 19633_at |
| 12475_at | 15437_at | 19669_at |
| 12482_s_at | 15562_at | 19848_s_at |
| 12490_at | 15638_s_at | 19858_s_at |
| 12531_at | 15647_s_at | 19878_at |
| 12540_s_at | 15654_s_at | 19892_at |
| 12577_at | 15655_s_at | 19974_s_at |
| 12629_at | 15658_s_at | 20022_at |
| 12642_at | 15695_s_at | 20032_at |
| 12660_at | 15846_at | 20049_at |
| 12676_s_at | 15930_at | 20081_at |
| 12712_f_at | 16053_i_at | 20155_s_at |
| 12725_r_at | 16078_s_at | 20163_s_at |
| 12777_i_at | 16229_at | 20296_s_at |
| 12790_s_at | 16465_at | 20336_at |
| 12801_at | 16484_s_at | 20341_at |
| 12887_s_at | 16596_s_at | 20365_s_at |
| 12933_r_at | 16600_s_at | 20372_at |
| 13153_r_at | 16642_s_at | 20489_at |
| 13228_at | 16914_s_at | 20491_at |
| 13362_s_at | 17027_s_at | 20576_at |
| 13428_at | 17066_s_at | 20577_at |
| 13538_at | 17083_s_at | 20609_at |
| 13565_at | 17128_s_at | 20672_at |
| 13588_at | 17380_at | |
| 13696_at | 17398_at | |
| 13702_s_at | 17448_at | |
| 13716_at | 17485_s_at | |
| 13764_at | 17490_s_at | |
| 14050_at | 17499_s_at | |
| 14055_s_at | 17505_s_at | |
| 14069_at | 17514_s_at | |
| 14078_at | 17593_r_at | |
| 14232_at | 17886_at | |
| 14346_at | 17913_s_at | |
| 14608_at | 17924_at | |
| 14609_at | 17954_s_at | |
| 14621_at | 17991_g_at | |
| 14635_s_at | 18057_i_at | |
| 14663_s_at | 18069_at | |
| 14688_s_at | 18328_at | |
| 14691_at | 18416_at | |
| 14704_s_at | 18604_at | |
| 14875_at | 18644_at | |
| 14911_s_at | 18881_at | |
| 14964_at | 19171_at | |
| 15022_at | 19181_s_at | |
| 15085_s_at | 19182_at | |

TABLE 21

OSMOTIC & SALINE STRESS RESPONSIVE SEQUENCES

| SEQ | AFFYMETRIX | SEQ | AFFYMETRIX | SEQ | AFFYMETRIX |
|--------|------------|--------|------------|--------|------------|
| ID NO: | ID NO: | ID NO: | ID NO: | ID NO: | ID NO: |
| 2586 | 12126_S_AT | 2634 | 16073_F_AT | 2681 | 19409_AT |
| 2587 | 12137_AT | 2635 | 16114_S_AT | 2682 | 19503_AT |
| 2588 | 12227_AT | 2636 | 16127_S_AT | 2683 | 19826_AT |
| 2589 | 12239_AT | | 18744_F_AT | 2684 | 19847_S_AT |
| 2590 | 12268_AT | 2637 | 16190_AT | 2685 | 19930_AT |
| 2591 | 12369_AT | 2638 | 16196_AT | 2686 | 19992_AT |
| 2592 | 12476_AT | 2639 | 16236_G_AT | 2687 | 20096_AT |
| 2593 | 12484_G_AT | | 19531_AT | 2688 | 20108_AT |
| 2594 | 12494_AT | 2640 | 16310_AT | 2689 | 20256_S_AT |
| 2595 | 12644_AT | 2641 | 16316_AT | 2690 | 20290_S_AT |
| 2596 | 12645_AT | 2642 | 16334_S_AT | 2691 | 20298_AT |
| 2597 | 12796_S_AT | 2643 | 16335_AT | 2692 | 20305_AT |
| 2598 | 12819_AT | 2644 | 16340_AT | 2693 | 20322_AT |
| 2599 | 12841_AT | 2645 | 16450_S_AT | 2694 | 20333_AT |
| 2600 | 12852_S_AT | 2646 | 16500_AT | 2695 | 20402_S_AT |
| | 19455_S_AT | 2647 | 16524_AT | 2696 | 20424_AT |
| 2601 | 13084_AT | 2648 | 16533_AT | 2697 | 20446_S_AT |
| 2602 | 13171_AT | 2649 | 16690_G_AT | 2698 | 20450_AT |
| 2603 | 13174_R_AT | 2650 | 16762_AT | 2699 | 20468_AT |
| 2604 | 13596_AT | 2651 | 16819_AT | 2700 | 20569_S_AT |
| 2605 | 13807_AT | 2652 | 16873_I_AT | 2701 | 20639_AT |
| 2606 | 13977_AT | 2653 | 16972_AT | 2702 | 20678_AT |
| 2607 | 13999_AT | 2654 | 16991_AT | 2703 | 20686_AT |
| 2608 | 14052_AT | 2655 | 17099_S_AT | | |
| 2609 | 14293_AT | 2656 | 17339_AT | | |
| 2610 | 14335_AT | 2657 | 17397_S_AT | | |
| 2611 | 14486_AT | 2658 | 17419_AT | | |
| 2612 | 14506_AT | 2659 | 17460_AT | | |
| 2613 | 14518_AT | 2660 | 17554_S_AT | | |
| 2614 | 14540_AT | 2661 | 17939_AT | | |
| 2615 | 14578_S_AT | 2662 | 18013_R_AT | | |
| 2616 | 14646_S_AT | | 18178_S_AT | | |
| 2617 | 14662_F_AT | 2663 | 18024_S_AT | | |
| | 15962_S_AT | 2664 | 18032_I_AT | | |
| 2618 | 14901_AT | 2665 | 18054_AT | | |
| 2619 | 14918_AT | 2666 | 18151_AT | | |
| 2620 | 14986_AT | 2667 | 18281_AT | | |
| 2621 | 15053_S_AT | 2668 | 18445_AT | | |
| 2622 | 15179_S_AT | 2669 | 18520_AT | | |
| 2623 | 15252_G_AT | 2670 | 18583_AT | | |
| 2624 | 15280_AT | 2671 | 18663_S_AT | | |
| 2625 | 15467_AT | 2672 | 18753_S_AT | | |
| 2626 | 15607_S_AT | 2673 | 18876_AT | | |
| 2627 | 15625_S_AT | 2674 | 18938_G_AT | | |
| 2628 | 15703_I_AT | 2675 | 18971_AT | | |
| 2629 | 15827_AT | 2676 | 18977_AT | | |
| 2630 | 15863_AT | 2677 | 18981_AT | | |
| 2631 | 15923_AT | 2678 | 19099_AT | | |
| 2632 | 15946_S_AT | 2679 | 19196_AT | | |
| 2633 | 16005_S_AT | 2680 | 19376_AT | | |

TABLE 22: 2X UP IN SALT & MANNITOL, ONLY

| | |
|------------|------------|
| 12126_s_at | 17548_s_at |
| 12227_at | 17554_s_at |
| 12369_at | 17961_at |
| 12521_at | 18032_i_at |
| 12644_at | 18054_at |
| 12645_at | 18151_at |
| 12724_f_at | 18167_s_at |
| 12795_at | 18281_at |
| 12796_s_at | 18520_at |
| 12841_at | 18663_s_at |
| 12852_s_at | 18744_f_at |
| 12958_at | 18753_s_at |
| 13014_at | 18789_at |
| 13174_r_at | 18876_at |
| 13211_s_at | 18909_s_at |
| 13596_at | 18938_g_at |
| 13640_at | 18977_at |
| 13789_at | 19099_at |
| 13977_at | 19108_at |
| 13999_at | 19135_at |
| 14069_at | 19227_at |
| 14083_at | 19376_at |
| 14089_at | 19429_at |
| 14293_at | 19455_s_at |
| 14675_s_at | 19531_at |
| 15053_s_at | 19789_s_at |
| 15058_s_at | 19878_at |
| 15252_g_at | 20017_at |
| 15280_at | 20096_at |
| 15437_at | 20256_s_at |
| 15607_s_at | 20290_s_at |
| 15625_s_at | 20305_at |
| 15827_at | 20322_at |
| 15863_at | 20333_at |
| 15880_at | 20420_at |
| 16005_s_at | 20424_at |
| 16031_at | 20689_s_at |
| 16073_f_at | |
| 16316_at | |
| 16334_s_at | |
| 16335_at | |
| 16450_s_at | |
| 16500_at | |
| 16524_at | |
| 16533_at | |
| 16597_s_at | |
| 16819_at | |
| 17085_s_at | |
| 17099_s_at | |
| 17339_at | |
| 17419_at | |
| 17442_i_at | |
| 17514_s_at | |

TABLE 23: 2X DOWN IN MANNITOL & SALT, ONLY

| | |
|------------|------------|
| 12239_at | 20108_at |
| 12251_at | 20298_at |
| 12476_at | 20421_at |
| 12484_g_at | 20432_at |
| 12494_at | 20446_s_at |
| 12561_at | 20639_at |
| 12647_s_at | |
| 12719_f_at | |
| 12819_at | |
| 12841_at | |
| 13084_at | |
| 13171_at | |
| 13172_s_at | |
| 13435_at | |
| 13807_at | |
| 14250_r_at | |
| 14335_at | |
| 14486_at | |
| 14506_at | |
| 14518_at | |
| 14901_at | |
| 15046_s_at | |
| 15179_s_at | |
| 15451_at | |
| 15703_i_at | |
| 15946_s_at | |
| 16014_s_at | |
| 16114_s_at | |
| 16310_at | |
| 16342_at | |
| 16712_at | |
| 16762_at | |
| 16972_at | |
| 16991_at | |
| 17397_s_at | |
| 17408_at | |
| 17460_at | |
| 17775_at | |
| 17939_at | |
| 18445_at | |
| 18583_at | |
| 18751_f_at | |
| 18971_at | |
| 18981_at | |
| 19156_s_at | |
| 19196_at | |
| 19359_s_at | |
| 19409_at | |
| 19503_at | |
| 19713_at | |
| 19718_at | |
| 19847_s_at | |
| 19930_at | |

TABLE 24

COLD, OSMOTIC & SALINE RESPONSIVE SEQUENCES

| SEQ | AFFYMETRIX | SEQ | AFFYMETRIX | SEQ | AFFYMETRIX |
|--------|------------|--------|------------|--------|------------|
| ID NO: | ID NO: | ID NO: | ID NO: | ID NO: | ID NO: |
| 1262 | 12004_AT | 1306 | 12945_AT | 1347 | 13725_AT |
| 1263 | 12023_S_AT | 1307 | 12958_AT | 1348 | 13764_AT |
| 1264 | 12078_AT | 1308 | 12964_AT | 1349 | 13771_AT |
| 1265 | 12115_AT | 1309 | 12968_AT | 1350 | 13789_AT |
| 1266 | 12118_AT | 1310 | 12972_AT | 1351 | 13916_AT |
| 1267 | 12150_AT | 1311 | 12989_S_AT | 1352 | 13965_S_AT |
| 1268 | 12251_AT | 1312 | 13004_AT | 1353 | 13967_AT |
| 1269 | 12271_S_AT | 1313 | 13014_AT | 1354 | 14028_AT |
| 1270 | 12276_AT | 1314 | 13025_AT | 1355 | 14039_AT |
| 1271 | 12332_S_AT | 1315 | 13036_AT | 1356 | 14046_AT |
| | 13211_S_AT | 1316 | 13099_S_AT | 1357 | 14049_AT |
| 1272 | 12338_AT | 1317 | 13136_AT | 1358 | 14069_AT |
| 1273 | 12400_AT | 1318 | 13146_S_AT | 1359 | 14077_AT |
| 1274 | 12430_AT | | 13239_S_AT | 1360 | 14080_AT |
| 1275 | 12457_AT | 1319 | 13153_R_AT | 1361 | 14083_AT |
| 1276 | 12521_AT | 1320 | 13159_AT | 1362 | 14089_AT |
| 1277 | 12522_AT | 1321 | 13176_AT | 1363 | 14090_I_AT |
| 1278 | 12530_AT | 1322 | 13217_S_AT | 1364 | 14097_AT |
| 1279 | 12536_S_AT | | 17500_S_AT | 1365 | 14116_AT |
| 1280 | 12538_AT | 1323 | 13225_S_AT | 1366 | 14151_AT |
| 1281 | 12561_AT | | 15997_S_AT | | 14219_AT |
| 1282 | 12574_AT | 1324 | 13230_S_AT | 1367 | 14170_AT |
| | 19019_I_AT | | 15972_S_AT | 1368 | 14172_AT |
| 1283 | 12595_AT | 1325 | 13279_S_AT | 1369 | 14192_AT |
| 1284 | 12606_AT | | 17477_S_AT | 1370 | 14224_AT |
| 1285 | 12609_AT | 1326 | 13280_S_AT | 1371 | 14227_AT |
| 1286 | 12622_AT | | 20301_S_AT | 1372 | 14244_S_AT |
| 1287 | 12630_AT | 1327 | 13282_S_AT | | 14245_AT |
| 1288 | 12647_S_AT | | 17027_S_AT | | 14645_S_AT |
| 1289 | 12676_S_AT | 1328 | 13426_AT | | 15974_G_AT |
| 1290 | 12697_AT | 1329 | 13432_AT | 1373 | 14248_AT |
| 1291 | 12698_AT | 1330 | 13435_AT | 1374 | 14250_R_AT |
| 1292 | 12719_F_AT | 1331 | 13447_S_AT | 1375 | 14367_AT |
| 1293 | 12724_F_AT | 1332 | 13474_AT | 1376 | 14381_AT |
| | 15871_S_AT | 1333 | 13511_AT | 1377 | 14384_AT |
| | 16597_S_AT | 1334 | 13546_AT | 1378 | 14398_S_AT |
| 1294 | 12749_AT | 1335 | 13547_S_AT | 1379 | 14487_AT |
| 1295 | 12765_AT | 1336 | 13548_AT | 1380 | 14582_AT |
| 1296 | 12769_AT | 1337 | 13555_AT | 1381 | 14597_AT |
| 1297 | 12781_AT | 1338 | 13587_AT | 1382 | 14609_AT |
| 1298 | 12785_AT | 1339 | 13595_AT | 1383 | 14612_AT |
| 1299 | 12792_S_AT | 1340 | 13610_S_AT | | 19267_S_AT |
| 1300 | 12795_AT | 1341 | 13627_AT | 1384 | 14614_AT |
| 1301 | 12805_S_AT | 1342 | 13640_AT | 1385 | 14636_S_AT |
| 1302 | 12857_AT | 1343 | 13645_AT | 1386 | 14644_S_AT |
| 1303 | 12883_S_AT | 1344 | 13647_AT | | 14658_S_AT |
| 1304 | 12909_S_AT | 1345 | 13706_S_AT | | 14659_S_AT |
| | 16539_S_AT | | 19701_S_AT | | 15964_S_AT |
| 1305 | 12932_S_AT | 1346 | 13716_AT | 1387 | 14675_S_AT |
| | 15605_S_AT | | 18228_AT | | |

TABLE 24 (cont)

| | | | | | |
|------|------------|------|------------|------|------------|
| 1388 | 14691_AT | 1443 | 15753_AT | 1496 | 16789_AT |
| | 14709_AT | 1444 | 15761_AT | 1497 | 16818_S_AT |
| 1389 | 14704_S_AT | 1445 | 15776_AT | 1498 | 16971_S_AT |
| | 15846_AT | 1446 | 15778_AT | 1499 | 17018_S_AT |
| 1390 | 14705_I_AT | 1447 | 15839_AT | 1500 | 17019_S_AT |
| 1391 | 14733_S_AT | 1448 | 15842_AT | 1501 | 17029_S_AT |
| 1392 | 14735_S_AT | 1449 | 15857_S_AT | 1502 | 17041_S_AT |
| 1393 | 14779_AT | 1450 | 15859_AT | 1503 | 17047_S_AT |
| 1394 | 14784_AT | 1451 | 15880_AT | 1504 | 17066_S_AT |
| 1395 | 14923_AT | 1452 | 15886_AT | 1505 | 17085_S_AT |
| 1396 | 14947_AT | 1453 | 15906_S_AT | 1506 | 17089_S_AT |
| 1397 | 14950_AT | 1454 | 15910_AT | 1507 | 17179_AT |
| 1398 | 14990_AT | 1455 | 15937_AT | 1508 | 17180_AT |
| 1399 | 14998_AT | 1456 | 15957_AT | 1509 | 17228_AT |
| 1400 | 15005_S_AT | 1457 | 15970_S_AT | 1510 | 17252_AT |
| 1401 | 15018_AT | 1458 | 15985_AT | 1511 | 17317_AT |
| 1402 | 15045_AT | 1459 | 16010_S_AT | 1512 | 17338_AT |
| 1403 | 15046_S_AT | | 16011_S_AT | 1513 | 17384_AT |
| 1404 | 15052_AT | | 17078_S_AT | 1514 | 17387_S_AT |
| 1405 | 15058_S_AT | 1460 | 16021_S_AT | 1515 | 17400_S_AT |
| 1406 | 15064_AT | 1461 | 16031_AT | 1516 | 17407_S_AT |
| 1407 | 15088_S_AT | 1462 | 16038_S_AT | 1517 | 17408_AT |
| 1408 | 15098_S_AT | 1463 | 16045_S_AT | 1518 | 17413_S_AT |
| 1409 | 15103_S_AT | 1464 | 16046_S_AT | 1519 | 17416_AT |
| 1410 | 15109_S_AT | 1465 | 16048_AT | 1520 | 17425_S_AT |
| 1411 | 15124_S_AT | 1466 | 16061_S_AT | 1521 | 17440_I_AT |
| 1412 | 15127_S_AT | 1467 | 16082_S_AT | 1522 | 17442_I_AT |
| 1413 | 15145_S_AT | 1468 | 16111_F_AT | 1523 | 17473_AT |
| 1414 | 15154_S_AT | 1469 | 16115_S_AT | 1524 | 17484_AT |
| 1415 | 15161_S_AT | 1470 | 16141_S_AT | 1525 | 17514_S_AT |
| 1416 | 15189_S_AT | 1471 | 16144_S_AT | 1526 | 17520_S_AT |
| 1417 | 15214_S_AT | 1472 | 16163_S_AT | 1527 | 17533_S_AT |
| 1418 | 15255_AT | 1473 | 16173_S_AT | 1528 | 17548_S_AT |
| 1419 | 15356_AT | 1474 | 16229_AT | | 19614_AT |
| 1420 | 15357_AT | 1475 | 16298_AT | 1529 | 17549_S_AT |
| 1421 | 15364_AT | 1476 | 16301_S_AT | 1530 | 17555_S_AT |
| 1422 | 15392_AT | 1477 | 16322_AT | 1531 | 17567_AT |
| 1423 | 15403_S_AT | 1478 | 16342_AT | 1532 | 17654_AT |
| 1424 | 15437_AT | 1479 | 16351_AT | 1533 | 17693_AT |
| 1425 | 15451_AT | 1480 | 16412_S_AT | 1534 | 17697_AT |
| 1426 | 15476_AT | 1481 | 16422_AT | 1535 | 17722_AT |
| 1427 | 15482_AT | 1482 | 16427_AT | 1536 | 17752_AT |
| 1428 | 15483_S_AT | 1483 | 16438_AT | 1537 | 17755_AT |
| 1429 | 15521_S_AT | 1484 | 16474_S_AT | 1538 | 17775_AT |
| 1430 | 15522_I_AT | 1485 | 16482_S_AT | 1539 | 17832_S_AT |
| 1431 | 15531_I_AT | 1486 | 16485_S_AT | 1540 | 17840_S_AT |
| 1432 | 15573_AT | | 18052_S_AT | 1541 | 17843_S_AT |
| 1433 | 15581_S_AT | 1487 | 16493_AT | 1542 | 17855_AT |
| 1434 | 15586_S_AT | 1488 | 16534_S_AT | 1543 | 17860_AT |
| 1435 | 15594_S_AT | 1489 | 16555_S_AT | 1544 | 17869_AT |
| 1436 | 15609_S_AT | 1490 | 16561_S_AT | 1545 | 17888_AT |
| 1437 | 15611_S_AT | | 17572_S_AT | 1546 | 17899_AT |
| 1438 | 15621_F_AT | 1491 | 16592_S_AT | 1547 | 17929_S_AT |
| 1439 | 15623_F_AT | 1492 | 16615_S_AT | 1548 | 17930_S_AT |
| 1440 | 15669_S_AT | 1493 | 16637_S_AT | 1549 | 17932_S_AT |
| 1441 | 15695_S_AT | 1494 | 16692_AT | 1550 | 17936_S_AT |
| 1442 | 15702_S_AT | 1495 | 16712_AT | | 18670_G_AT |

TABLE 24 (cont)

| | | | | | |
|------|--------------|------|------------|------|------------|
| 1551 | 17957_AT | 1606 | 19152_AT | 1663 | 20040_AT |
| 1552 | 17961_AT | 1607 | 19156_S_AT | 1664 | 20042_S_AT |
| 1553 | 17962_AT | 1608 | 19182_AT | 1665 | 20060_AT |
| 1554 | 17963_AT | 1609 | 19186_S_AT | | 20438_AT |
| 1555 | 17971_S_AT | 1610 | 19214_AT | 1666 | 20089_AT |
| 1556 | 17975_AT | 1611 | 19216_AT | 1667 | 20118_AT |
| | 18742_F_AT | 1612 | 19227_AT | 1668 | 20144_AT |
| 1557 | 18016_R_AT | 1613 | 19243_AT | 1669 | 20149_AT |
| 1558 | 18069_AT | 1614 | 19288_AT | 1670 | 20179_AT |
| 1559 | 18122_AT | 1615 | 19359_S_AT | 1671 | 20190_AT |
| 1560 | 18140_AT | 1616 | 19368_AT | 1672 | 20194_AT |
| 1561 | 18199_AT | 1617 | 19379_AT | 1673 | 20219_AT |
| 1562 | 18224_S_AT | 1618 | 19380_S_AT | 1674 | 20245_S_AT |
| 1563 | 18225_AT | 1619 | 19398_AT | 1675 | 20263_AT |
| 1564 | 18235_AT | 1620 | 19421_AT | 1676 | 20308_S_AT |
| 1565 | 18259_S_AT | 1621 | 19424_AT | 1677 | 20335_S_AT |
| 1566 | 18265_AT | 1622 | 19429_AT | 1678 | 20338_AT |
| 1567 | 18270_AT1568 | 1623 | 19430_AT | 1679 | 20345_AT |
| | 18280_AT | 1624 | 19450_AT | 1680 | 20365_S_AT |
| 1569 | 18289_AT | 1625 | 19457_AT | 1681 | 20382_S_AT |
| 1570 | 18296_AT | 1626 | 19467_AT | 1682 | 20390_S_AT |
| 1571 | 18298_AT | 1627 | 19516_AT | 1683 | 20395_AT |
| 1572 | 18314_I_AT | 1628 | 19545_AT | 1684 | 20420_AT |
| 1573 | 18318_AT | 1629 | 19564_AT | 1685 | 20421_AT |
| 1574 | 18325_AT | 1630 | 19577_AT | 1686 | 20432_AT |
| 1575 | 18351_S_AT | 1631 | 19593_AT | 1687 | 20437_AT |
| 1576 | 18471_AT | 1632 | 19602_AT | 1688 | 20442_I_AT |
| 1577 | 18482_S_AT | 1633 | 19618_AT | 1689 | 20463_S_AT |
| 1578 | 18484_AT | 1634 | 19638_AT | 1690 | 20491_AT |
| 1579 | 18560_AT | 1635 | 19640_AT | 1691 | 20537_AT |
| 1580 | 18564_AT | 1636 | 19646_S_AT | 1692 | 20573_AT |
| 1581 | 18590_AT | 1637 | 19656_S_AT | 1693 | 20636_AT |
| 1582 | 18594_AT | 1638 | 19670_AT | 1694 | 20638_AT |
| 1583 | 18595_AT | 1639 | 19696_AT | 1695 | 20641_AT |
| 1584 | 18596_AT | 1640 | 19713_AT | 1696 | 20658_S_AT |
| 1585 | 18629_S_AT | 1641 | 19718_AT | 1697 | 20689_S_AT |
| 1586 | 18637_AT | 1642 | 19722_S_AT | 1698 | 20698_S_AT |
| 1587 | 18661_AT | 1643 | 19749_AT | | |
| 1588 | 18668_AT | 1644 | 19755_AT | | |
| 1589 | 18699_I_AT | 1645 | 19762_AT | | |
| 1590 | 18747_F_AT | 1646 | 19789_S_AT | | |
| | 18789_AT | 1647 | 19815_AT | | |
| 1591 | 18761_AT | 1648 | 19843_AT | | |
| 1592 | 18833_AT | 1649 | 19869_AT | | |
| 1593 | 18875_S_AT | 1650 | 19878_AT | | |
| 1594 | 18894_AT | 1651 | 19883_AT | | |
| 1595 | 18936_AT | 1652 | 19894_AT | | |
| 1596 | 18946_AT | 1653 | 19926_AT | | |
| 1597 | 18953_AT | 1654 | 19944_AT | | |
| 1598 | 18955_AT | 1655 | 19968_AT | | |
| 1599 | 18972_AT | 1656 | 19977_AT | | |
| 1600 | 19008_S_AT | 1657 | 19982_AT | | |
| 1601 | 19108_AT | 1658 | 19987_AT | | |
| 1602 | 19123_AT | 1659 | 19991_AT | | |
| 1603 | 19135_AT | 1660 | 20015_AT | | |
| 1604 | 19137_AT | 1661 | 20017_AT | | |
| 1605 | 19141_AT | 1662 | 20031_AT | | |

TABLE 25: 2X UP IN COLD, SALT & MANNITOL

| | | | |
|------------|------------|------------|------------|
| 12023_s_at | 14733_s_at | 17047_s_at | 19640_at |
| 12332_s_at | 14923_at | 17179_at | 19646_s_at |
| 12530_at | 14990_at | 17180_at | 19656_s_at |
| 12536_s_at | 15005_s_at | 17252_at | 19701_s_at |
| 12574_at | 15018_at | 17384_at | 19843_at |
| 12595_at | 15052_at | 17407_s_at | 19944_at |
| 12698_at | 15088_s_at | 17484_at | 19982_at |
| 12749_at | 15098_s_at | 17520_s_at | 19987_at |
| 12765_at | 15103_s_at | 17555_s_at | 19991_at |
| 12769_at | 15145_s_at | 17572_s_at | 20042_s_at |
| 12785_at | 15154_s_at | 17722_at | 20060_at |
| 12857_at | 15161_s_at | 17752_at | 20118_at |
| 12964_at | 15214_s_at | 17840_s_at | 20144_at |
| 12972_at | 15356_at | 17843_s_at | 20149_at |
| 12989_s_at | 15521_s_at | 17860_at | 20179_at |
| 13004_at | 15573_at | 17929_s_at | 20194_at |
| 13025_at | 15586_s_at | 17936_s_at | 20245_s_at |
| 13036_at | 15609_s_at | 17962_at | 20390_s_at |
| 13099_s_at | 15611_s_at | 18052_s_at | 20437_at |
| 13136_at | 15621_f_at | 18069_at | 20463_s_at |
| 13176_at | 15669_s_at | 18122_at | 20491_at |
| 13220_s_at | 15695_s_at | 18199_at | 20641_at |
| 13225_s_at | 15753_at | 18259_s_at | 20658_s_at |
| 13230_s_at | 15761_at | 18280_at | |
| 13239_s_at | 15857_s_at | 18289_at | |
| 13426_at | 15871_s_at | 18314_i_at | |
| 13474_at | 15964_s_at | 18318_at | |
| 13548_at | 15970_s_at | 18325_at | |
| 13555_at | 15974_g_at | 18482_s_at | |
| 13595_at | 15997_s_at | 18590_at | |
| 13627_at | 16011_s_at | 18594_at | |
| 13645_at | 16021_s_at | 18595_at | |
| 13647_at | 16038_s_at | 18596_at | |
| 13706_s_at | 16046_s_at | 18629_s_at | |
| 13965_s_at | 16082_s_at | 18661_at | |
| 13967_at | 16111_f_at | 18668_at | |
| 14080_at | 16115_s_at | 18699_i_at | |
| 14090_i_at | 16127_s_at | 18722_s_at | |
| 14097_at | 16141_s_at | 18936_at | |
| 14116_at | 16144_s_at | 18953_at | |
| 14151_at | 16163_s_at | 18955_at | |
| 14172_at | 16236_g_at | 18972_at | |
| 14192_at | 16301_s_at | 19008_s_at | |
| 14244_s_at | 16322_at | 19152_at | |
| 14245_at | 16422_at | 19186_s_at | |
| 14367_at | 16474_s_at | 19214_at | |
| 14398_s_at | 16482_s_at | 19368_at | |
| 14582_at | 16485_s_at | 19379_at | |
| 14614_at | 16555_s_at | 19380_s_at | |
| 14644_s_at | 16561_s_at | 19421_at | |
| 14645_s_at | 16592_s_at | 19545_at | |
| 14658_s_at | 16637_s_at | 19614_at | |
| 14659_s_at | 17041_s_at | 19638_at | |

TABLE 26: 2X DOWN IN COLD, MANNITOL & SALT, ONLY

| | | | |
|------------|------------|------------|------------|
| 12078_at | 15189_s_at | 17869_at | 20015_at |
| 12115_at | 15357_at | 17888_at | 20040_at |
| 12118_at | 15364_at | 17930_s_at | 20089_at |
| 12150_at | 15403_s_at | 17932_s_at | 20190_at |
| 12271_s_at | 15476_at | 17957_at | 20219_at |
| 12276_at | 15483_s_at | 17963_at | 20263_at |
| 12338_at | 15522_i_at | 17971_s_at | 20301_s_at |
| 12400_at | 15531_i_at | 17975_at | 20308_s_at |
| 12430_at | 15594_s_at | 18016_r_at | 20338_at |
| 12538_at | 15702_s_at | 18140_at | 20345_at |
| 12622_at | 15778_at | 18224_s_at | 20395_at |
| 12630_at | 15839_at | 18225_at | 20442_i_at |
| 12792_s_at | 15842_at | 18228_at | 20537_at |
| 12805_s_at | 15859_at | 18235_at | 20573_at |
| 12883_s_at | 15872_at | 18265_at | 20636_at |
| 12909_s_at | 15880_at | 18270_at | 20638_at |
| 12932_s_at | 15886_at | 18296_at | 20698_s_at |
| 12968_at | 15906_s_at | 18298_at | |
| 13159_at | 15957_at | 18471_at | |
| 13217_s_at | 15985_at | 18564_at | |
| 13279_s_at | 16045_s_at | 18637_at | |
| 13282_s_at | 16061_s_at | 18742_f_at | |
| 13432_at | 16173_s_at | 18761_at | |
| 13511_at | 16298_at | 18833_at | |
| 13546_at | 16351_at | 18875_s_at | |
| 13547_s_at | 16412_s_at | 18894_at | |
| 13587_at | 16438_at | 18946_at | |
| 13610_s_at | 16493_at | 19123_at | |
| 13640_at | 16534_s_at | 19216_at | |
| 13725_at | 16539_s_at | 19243_at | |
| 13771_at | 16615_s_at | 19267_s_at | |
| 13916_at | 16692_at | 19288_at | |
| 14028_at | 16789_at | 19398_at | |
| 14039_at | 16818_s_at | 19424_at | |
| 14046_at | 16971_s_at | 19430_at | |
| 14049_at | 17018_s_at | 19450_at | |
| 14077_at | 17029_s_at | 19457_at | |
| 14170_at | 17089_s_at | 19467_at | |
| 14227_at | 17228_at | 19516_at | |
| 14248_at | 17338_at | 19564_at | |
| 14381_at | 17387_s_at | 19577_at | |
| 14384_at | 17413_s_at | 19593_at | |
| 14487_at | 17416_at | 19602_at | |
| 14597_at | 17425_s_at | 19618_at | |
| 14705_i_at | 17440_i_at | 19670_at | |
| 14709_at | 17473_at | 19696_at | |
| 14779_at | 17533_s_at | 19722_s_at | |
| 14947_at | 17549_s_at | 19749_at | |
| 14950_at | 17654_at | 19755_at | |
| 14998_at | 17693_at | 19815_at | |
| 15045_at | 17697_at | 19926_at | |
| 15109_s_at | 17755_at | 19968_at | |
| 15124_s_at | 17832_s_at | 19977_at | |

TABLE 27: 2X ROOT SPECIFIC (COLD, SALINE & OSMOTIC STRESSES)

| | | | |
|------------|------------|------------|------------|
| 11997_at | 14069_at | 16052_at | 18327_s_at |
| 12004_at | 14072_at | 16053_i_at | 18597_at |
| 12051_at | 14073_at | 16105_s_at | 18607_s_at |
| 12072_at | 14097_at | 16161_s_at | 18636_at |
| 12150_at | 14139_at | 16165_s_at | 18663_s_at |
| 12151_at | 14235_at | 16298_at | 18782_at |
| 12166_i_at | 14250_r_at | 16334_s_at | 18885_at |
| 12219_at | 14578_s_at | 16422_at | 18888_at |
| 12315_at | 14582_at | 16427_at | 18942_at |
| 12332_s_at | 14640_s_at | 16440_s_at | 18955_at |
| 12374_i_at | 14643_s_at | 16442_s_at | 19060_at |
| 12482_s_at | 14644_s_at | 16468_at | 19108_at |
| 12515_at | 14658_s_at | 16488_at | 19135_at |
| 12522_at | 14659_s_at | 16511_at | 19137_at |
| 12538_at | 14711_s_at | 16529_at | 19195_at |
| 12571_s_at | 14900_at | 16553_f_at | 19263_at |
| 12574_at | 14924_at | 16568_s_at | 19376_at |
| 12609_at | 14990_at | 16914_s_at | 19406_at |
| 12678_i_at | 15018_at | 16965_s_at | 19432_s_at |
| 12698_at | 15022_at | 16981_s_at | 19835_at |
| 12749_at | 15107_s_at | 16989_at | 19836_at |
| 12760_g_at | 15116_f_at | 17033_s_at | 19840_s_at |
| 12765_at | 15120_s_at | 17066_s_at | 19841_at |
| 12768_at | 15124_s_at | 17085_s_at | 19843_at |
| 12769_at | 15131_s_at | 17252_at | 19926_at |
| 12772_at | 15132_s_at | 17376_at | 19972_at |
| 12777_i_at | 15137_s_at | 17378_at | 19977_at |
| 12958_at | 15184_s_at | 17388_at | 19991_at |
| 12989_s_at | 15188_s_at | 17415_at | 20034_i_at |
| 13015_s_at | 15208_s_at | 17429_s_at | 20042_s_at |
| 13134_s_at | 15252_g_at | 17463_at | 20189_at |
| 13146_s_at | 15343_at | 17485_s_at | 20194_at |
| 13172_s_at | 15389_at | 17490_s_at | 20200_at |
| 13178_at | 15392_at | 17567_at | 20214_i_at |
| 13179_at | 15448_at | 17585_s_at | 20239_g_at |
| 13187_i_at | 15503_at | 17595_s_at | 20262_at |
| 13211_s_at | 15531_i_at | 17840_s_at | 20269_at |
| 13239_s_at | 15594_s_at | 17860_at | 20294_at |
| 13273_s_at | 15609_s_at | 17880_s_at | 20312_s_at |
| 13297_s_at | 15623_f_at | 17894_at | 20382_s_at |
| 13549_at | 15639_s_at | 17896_at | 20396_at |
| 13604_at | 15670_s_at | 17899_at | 20432_at |
| 13629_s_at | 15680_s_at | 17911_at | 20444_at |
| 13706_s_at | 15859_at | 17935_at | 20446_s_at |
| 13714_at | 15900_at | 17961_at | 20480_s_at |
| 13751_at | 15923_at | 18024_s_at | 20586_i_at |
| 13895_at | 15962_s_at | 18122_at | 20612_s_at |
| 13933_at | 15964_s_at | 18222_at | 20672_at |
| 13967_at | 15965_at | 18224_s_at | 20686_at |
| 13985_s_at | 15975_s_at | 18252_at | 20689_s_at |
| 14028_at | 15985_at | 18255_at | |
| 14030_at | 16001_at | 18269_s_at | |
| 14058_at | 16048_at | 18270_at | |

TABLE 28: 2X LEAF SPECIFIC (COLD, SALINE & OSMOTIC STRESSES)

| | |
|------------|------------|
| 12169_i_at | 16136_s_at |
| 12186_at | 16172_s_at |
| 12187_at | 16316_at |
| 12211_at | 16385_s_at |
| 12212_at | 16455_at |
| 12214_g_at | 16485_s_at |
| 12270_at | 16512_s_at |
| 12645_at | 16547_s_at |
| 12754_g_at | 16548_s_at |
| 12774_at | 16629_s_at |
| 12793_at | 16673_at |
| 12796_s_at | 16899_at |
| 12910_s_at | 17010_s_at |
| 12916_s_at | 17018_s_at |
| 12953_at | 17054_s_at |
| 13090_at | 17095_s_at |
| 13124_at | 17097_s_at |
| 13335_at | 17273_at |
| 13550_at | 17394_s_at |
| 13567_at | 17420_at |
| 13568_at | 17449_s_at |
| 13596_at | 17600_s_at |
| 13614_at | 17843_s_at |
| 13678_s_at | 17913_s_at |
| 13719_at | 17966_at |
| 14014_at | 18003_at |
| 14096_at | 18081_at |
| 14118_i_at | 18560_at |
| 14369_at | 18588_at |
| 14478_at | 18626_at |
| 14513_s_at | 18644_at |
| 14540_at | 18666_s_at |
| 14596_at | 18742_f_at |
| 14733_s_at | 18977_at |
| 14986_at | 18994_at |
| 15045_at | 19227_at |
| 15097_s_at | 19373_at |
| 15098_s_at | 19834_at |
| 15145_s_at | 19867_at |
| 15153_s_at | 19998_at |
| 15154_s_at | 20062_at |
| 15182_s_at | 20199_at |
| 15203_s_at | 20256_s_at |
| 15372_at | 20284_at |
| 15521_s_at | 20437_at |
| 15581_s_at | 20442_i_at |
| 15621_f_at | 20450_at |
| 15642_s_at | 20468_at |
| 15776_at | 20547_at |
| 15910_at | 20635_s_at |
| 16017_at | |
| 16046_s_at | |
| 16115_s_at | |

TABLE 29: 2X TRANSCRIPTION (COLD, SALINE & OSMOTIC STRESSES)

| | | |
|------------|------------|------------|
| 12068_at | 15665_s_at | 19836_at |
| 12166_i_at | 15679_s_at | 19860_at |
| 12374_i_at | 15720_at | 19866_at |
| 12392_at | 15871_s_at | 19898_at |
| 12431_at | 16072_s_at | 20262_at |
| 12450_s_at | 16073_f_at | 20335_s_at |
| 12503_at | 16105_s_at | 20362_at |
| 12536_s_at | 16111_f_at | 20424_at |
| 12540_s_at | 16127_s_at | 20437_at |
| 12541_at | 16534_s_at | 20456_at |
| 12587_at | 16582_s_at | 20515_s_at |
| 12594_at | 16589_s_at | 20635_s_at |
| 12595_at | 16747_at | |
| 12704_f_at | 17019_s_at | |
| 12705_f_at | 17129_s_at | |
| 12709_f_at | 17160_at | |
| 12712_f_at | 17520_s_at | |
| 12719_f_at | 17538_s_at | |
| 12724_f_at | 17555_s_at | |
| 12725_r_at | 17609_at | |
| 12726_f_at | 17896_at | |
| 12734_f_at | 17971_s_at | |
| 12736_f_at | 17975_at | |
| 12737_f_at | 17978_s_at | |
| 12812_at | 18121_s_at | |
| 12949_at | 18167_s_at | |
| 12951_at | 18197_at | |
| 12966_s_at | 18222_at | |
| 13023_at | 18318_at | |
| 13034_s_at | 18576_s_at | |
| 13087_at | 18629_s_at | |
| 13270_at | 18738_f_at | |
| 13273_s_at | 18742_f_at | |
| 13432_at | 18744_f_at | |
| 13555_at | 18745_f_at | |
| 13688_s_at | 18747_f_at | |
| 13714_at | 18750_f_at | |
| 13965_s_at | 18751_f_at | |
| 13987_s_at | 18789_at | |
| 14003_at | 18834_at | |
| 14144_at | 18942_at | |
| 14178_at | 19083_at | |
| 14223_at | 19202_at | |
| 14235_at | 19209_s_at | |
| 14303_s_at | 19232_s_at | |
| 14393_at | 19315_at | |
| 14553_at | 19489_s_at | |
| 14781_at | 19611_s_at | |
| 15046_s_at | 19646_s_at | |
| 15053_s_at | 19707_s_at | |
| 15214_s_at | 19722_s_at | |
| 15510_r_at | 19744_at | |
| 15638_s_at | 19755_at | |

TABLE 30: 2X PHOSPHATES (COLD, SALINE & OSMOTIC STRESSES)

12470_at
12556_at
13128_at
13135_s_at
13180_s_at
13192_s_at
13193_s_at
13587_at
13995_at
14335_at
15073_at
15171_s_at
15240_at
15586_s_at
15641_s_at
15651_f_at
15990_at
16232_s_at
16576_f_at
16753_at
17423_s_at
17525_s_at
17537_s_at
17929_s_at
17954_s_at
18012_s_at
18308_i_at
18616_at
18847_at
18936_at
18980_at
19243_at
19263_at
19638_at
19883_at
19932_at
20333_at
20393_at
20570_at

TABLE 31: 2X KINASES (COLD, SALINE & OSMOTIC STRESSES)

| | | |
|------------|------------|------------|
| 12253_g_at | 16059_s_at | 20144_at |
| 12270_at | 16087_s_at | 20219_at |
| 12271_s_at | 16088_f_at | 20223_at |
| 12276_at | 16125_s_at | 20232_s_at |
| 12278_at | 16137_s_at | 20235_i_at |
| 12284_at | 16140_s_at | 20282_s_at |
| 12300_at | 16143_s_at | 20298_at |
| 12307_at | 16144_s_at | 20396_at |
| 12353_at | 16160_f_at | 20439_at |
| 12357_s_at | 16171_s_at | 20462_at |
| 12390_at | 16357_at | |
| 12394_at | 16412_s_at | |
| 12395_s_at | 16568_s_at | |
| 12408_at | 16570_s_at | |
| 12452_at | 16571_s_at | |
| 12477_at | 16584_s_at | |
| 12490_at | 16651_s_at | |
| 12497_at | 16652_s_at | |
| 12532_at | 16672_at | |
| 12697_at | 16818_s_at | |
| 12901_s_at | 16840_at | |
| 12902_at | 17068_s_at | |
| 12958_at | 17122_s_at | |
| 12959_at | 17252_at | |
| 13068_at | 17323_at | |
| 13246_at | 17475_at | |
| 13324_at | 17752_at | |
| 13332_at | 17921_s_at | |
| 13362_s_at | 17933_at | |
| 13370_at | 17935_at | |
| 13550_at | 18013_r_at | |
| 14030_at | 18046_s_at | |
| 14048_at | 18122_at | |
| 14194_at | 18176_at | |
| 14196_at | 18316_at | |
| 14217_at | 18455_at | |
| 14459_at | 18459_at | |
| 14603_at | 18482_s_at | |
| 14637_s_at | 18543_at | |
| 14686_s_at | 18706_s_at | |
| 15005_s_at | 18782_at | |
| 15175_s_at | 18924_at | |
| 15270_at | 19117_s_at | |
| 15475_s_at | 19437_s_at | |
| 15497_s_at | 19442_at | |
| 15577_s_at | 19458_at | |
| 15616_s_at | 19464_at | |
| 15633_s_at | 19469_at | |
| 15634_s_at | 19562_at | |
| 15668_s_at | 19655_at | |
| 15680_s_at | 19749_at | |
| 15798_at | 19854_at | |
| 16034_at | 19904_at | |

TABLE 32

GenBank: accession numbers and source organisms for nucleotide and amino acid sequence homologs of the listed SEQ ID NO:

| | | | |
|---------------|---------------|--------------------------------|----------------------|
| SEQ ID NO. 4 | SEQ ID NO. 40 | | |
| AAG14455.1 | BAB20583.1 | Tulipa gesneriana | Zea mays |
| AAG14456.1 | AAK13126.1 | Tulipa gesneriana | Oryza sativa |
| AAG14454.1 | CAC09578.1 | Tulipa gesneriana | Fagus sylvatica |
| SEQ ID NO. 12 | SEQ ID NO. 41 | | |
| BAB20886.1 | BAB39155.1 | Oryza sativa | Pisum sativum |
| CAA05081.1 | AAG13663.1 | Triticum turgidum subsp. durum | Zea mays |
| AAC19392.1 | BAA90816.1 | Mesembryanthemum crystallinum | Oryza sativa |
| CAA33082.1 | AAC98090.1 | Spinacia oleracea | Zea mays |
| AAC04671.1 | AAC98091.1 | Brassica napus | Oryza sativa |
| AAF88067.1 | | Triticum aestivum | |
| BAA25681.1 | | Brassica rapa | |
| AAC32111.1 | | Picea mariana | |
| AAG35777.1 | | Brassica oleracea var. | |
| albogiabra | | | |
| AAB53694.1 | CAA61510.1 | Brassica napus | Oryza sativa |
| BAA05546.1 | AAF59906.1 | Oryza sativa | Glycine max |
| BAA04864.1 | AAF91322.1 | Oryza sativa | Glycine max |
| AAB51522.1 | AAF91323.1 | Oryza sativa | Glycine max |
| CAA94534.1 | AAF59905.1 | Oryza sativa | Glycine max |
| CAA35827.1 | AAC36318.1 | Ricinus communis | Malus x domestica |
| CAA35826.1 | CAC20842.1 | Spinacia oleracea | Pinus sylvestris |
| | AAB36558.1 | Spinacia oleracea | Ipomoea nil |
| | BAA83373.1 | | Oryza sativa |
| | BAA84787.1 | | Oryza sativa |
| | AAF34426.1 | | Oryza sativa |
| | AAC49123.1 | Nicotiana sylvestris | Oryza sativa |
| | AAF75791.1 | Pisum sativum | Oryza longistaminata |
| | AAF40306.1 | Vigna radiata | Oryza longistaminata |
| | CAA68193.1 | Spinacia oleracea | Oryza sativa |
| | AAD20980.1 | Zea mays | Nicotiana tabacum |
| | BAA95704.1 | Oryza sativa | Ipomoea nil |
| | BAA95705.1 | Oryza sativa | Oryza longistaminata |
| SEQ ID NO. 13 | SEQ ID NO. 48 | | |
| BAA03763.1 | CAA61510.1 | | Oryza sativa |
| AAF75791.1 | AAF59906.1 | | Glycine max |
| AAF40306.1 | AAF91322.1 | | Glycine max |
| CAA68193.1 | AAF91324.1 | | Glycine max |
| AAD20980.1 | AAF91323.1 | | Glycine max |
| BAA95704.1 | AAF59905.1 | | Glycine max |
| BAA95705.1 | AAC36318.1 | | Malus x domestica |
| | CAC20842.1 | | Pinus sylvestris |
| | AAB36558.1 | | Ipomoea nil |
| | BAA83373.1 | | Oryza sativa |
| | BAA84787.1 | | Oryza sativa |
| | AAF34426.1 | | Oryza sativa |
| | AAC49123.1 | | Oryza sativa |
| | AAF75791.1 | | Oryza longistaminata |
| | AAF40306.1 | | Oryza longistaminata |
| | CAA68193.1 | | Oryza sativa |
| | AAD20980.1 | | Nicotiana tabacum |
| | BAA95704.1 | | Ipomoea nil |
| | BAA95705.1 | | Oryza longistaminata |
| SEQ ID NO. 17 | SEQ ID NO. 49 | | |
| BAA13181.1 | AAB82755.1 | Oryza sativa | Oryza longistaminata |

| | | | | | |
|---------------|----------|-----------------------|---------------|----------|---------------------------|
| AAC49123.1 | U37133 | Oryza sativa | AAC23542.1 | U20948 | Ipomoea trifida |
| AAC80225.1 | U72723 | Oryza longistaminata | CAA73134.1 | Y12531 | Brassica oleracea |
| AAF34426.1 | AF172282 | Oryza sativa | CAA67145.1 | X98520 | Brassica oleracea |
| CAC20842.1 | AJ250467 | Pinus sylvestris | BAA23676.1 | AB000970 | Brassica rapa |
| BAA83373.1 | AP000391 | Oryza sativa | BAA92836.1 | AB032473 | Brassica oleracea |
| BAA84787.1 | AP000559 | Oryza sativa | CAB89179.1 | AJ245479 | Brassica napus subsp. nap |
| AAB82756.1 | U72724 | Oryza sativa | AAA33008.1 | M97667 | Brassica napus |
| AAF91323.1 | AF244889 | Glycine max | BAA92837.1 | AB032474 | Brassica oleracea |
| AAC36318.1 | AF053127 | Malus x domestica | CAB41879.1 | Y18260 | Brassica oleracea |
| AAF91324.1 | AF244890 | Glycine max | CAA79355.1 | Z18921 | Brassica oleracea |
| AAF91322.1 | AF244888 | Glycine max | BAA21132.1 | D88193 | Brassica oleracea |
| AAF59905.1 | AF197946 | Glycine max | BAA06285.1 | D30049 | Brassica rapa |
| AAF59906.1 | AF197947 | Glycine max | AAA62232.1 | U00443 | Brassica rapa |
| AAB36558.1 | U77888 | Ipomoea nil | CAA74662.1 | Y14286 | Brassica napus |
| CAA61510.1 | X89226 | Oryza sativa | CAB41878.1 | Y18259 | Brassica oleracea |
| AAB82753.1 | U72726 | Oryza longistaminata | AAA33000.1 | M76647 | Brassica oleracea |
| BAA88636.1 | AB029327 | Nicotiana tabacum | BAA07577.2 | D38564 | Brassica rapa |
| AAG52992.1 | U77888 | Ipomoea nil | BAA07576.1 | D38563 | Brassica rapa |
| AAB61708.1 | U93048 | Daucus carota | BAB21001.1 | AB054061 | Brassica rapa |
| SEQ ID NO. 50 | | | AAB93834.1 | U82481 | Zea mays |
| BAA22559.1 | AB007503 | Glycine max | AAD21872.1 | AF078082 | Phaseolus vulgaris |
| BAA24289.1 | AB010148 | Panax ginseng | AAD52097.1 | AF088885 | Nicotiana tabacum |
| BAA13084.1 | D86410 | Glycyrrhiza glabra | AAF34428.1 | AF172282 | Oryza sativa |
| BAA13083.1 | D86409 | Glycyrrhiza glabra | SEQ ID NO. 52 | | |
| AAB08578.1 | U60057 | Nicotiana tabacum | AAB61708.1 | U93048 | Daucus carota |
| AAD20626.1 | AF124842 | Capsicum annuum | BAA83373.1 | AP000391 | Oryza sativa |
| BAA82093.1 | AB022599 | Solanum tuberosum | BAA84787.1 | AP000559 | Oryza sativa |
| AAA87048.1 | U46000 | Nicotiana benthamiana | AAG52992.1 | U77888 | Ipomoea nil |
| AAG14896.1 | AF302464 | Artemisia annua | AAF91322.1 | AF244888 | Glycine max |
| BAA22558.1 | AB007502 | Zea mays | AAF91323.1 | AF244889 | Glycine max |
| BAA22557.1 | AB007501 | Oryza sativa | AAK21965.1 | AY028699 | Brassica napus |
| AAB02945.1 | U59683 | Nicotiana tabacum | AAF59906.1 | AF197947 | Glycine max |
| AAF20201.1 | AF205791 | Botryococcus braunii | CAA61510.1 | X89226 | Oryza sativa |
| AAF71269.1 | AF249900 | Citrus sinensis | AAB36558.1 | U77888 | Ipomoea nil |
| AAD56387.1 | AF181557 | Artemisia annua | AAF59905.1 | AF197946 | Glycine max |
| AAF63255.1 | AF205790 | Botryococcus braunii | AAG03090.1 | AC073405 | Oryza sativa |
| SEQ ID NO. 51 | | | AAF34426.1 | AF172282 | Oryza sativa |
| CAA73133.1 | Y12530 | Brassica oleracea | AAA33915.1 | I27821 | Oryza sativa |
| CAA74661.1 | Y14285 | Brassica oleracea | AAD21872.1 | AF078082 | Phaseolus vulgaris |
| | | | AAG16628.1 | AY007545 | Brassica napus |

| | | | | | |
|---------------|----------|-------------------------------|---------------|----------|----------------------------|
| AAC36318.1 | AF053127 | Malus x domestica | BAA21673.1 | AB006033 | Allium cepa |
| AAK21965.1 | AY028699 | Brassica napus | AAB41817.1 | M58365 | Medicago sativa |
| AAF91324.1 | AF244890 | Glycine max | AAA33479.1 | M60526 | Zea mays |
| AAF91323.1 | AF244889 | Glycine max | CAA73997.1 | Y13646 | Petunia x hybrida |
| CAA97692.1 | Z73295 | Catharanthus roseus | BAA19553.1 | D64036 | Oryza sativa |
| CAR61510.1 | X89226 | Oryza sativa | CAA66234.1 | X97638 | Antirrhinum majus |
| AAF91322.1 | AF244888 | Glycine max | AAD30506.1 | AF129886 | Vigna radiata |
| AAK11569.1 | AF318493 | Lycopersicon hirsutum | CAA41172.1 | X58194 | Oryza sativa |
| CAB51834.1 | 00069 | Oryza sativa | AAD08721.1 | AF038570 | Dunaliella tertiolecta |
| AAF76307.1 | AF220602 | Lycopersicon pimpinellifolium | CAC15504.1 | AJ297917 | Lycopersicon esculentum |
| AAB47424.1 | U59317 | Lycopersicon pimpinellifolium | ARG01533.1 | AF289466 | Nicotiana tabacum |
| AAK11566.1 | AF318490 | Lycopersicon hirsutum | AG01532.1 | AF289465 | Nicotiana tabacum |
| AAB47423.1 | U59315 | Lycopersicon pimpinellifolium | CAC15503.1 | AJ297916 | Lycopersicon esculentum |
| AAC48914.1 | U02271 | Lycopersicon pimpinellifolium | CAA66236.1 | X97640 | Antirrhinum majus |
| AAF76306.1 | AF220602 | Lycopersicon pimpinellifolium | CAC17703.1 | AJ278885 | Chenopodium rubrum |
| AAF76313.1 | AF220603 | Lycopersicon esculentum | BAB18271.1 | AB035141 | Chlamydomonas reinhardtii |
| AAB47421.1 | U59316 | Lycopersicon esculentum | CAB37188.1 | AJ224336 | Medicago sativa |
| AG03090.1 | AC073405 | Lycopersicon esculentum | CAA47099.1 | X66469 | Medicago sativa |
| AAK33915.1 | L27821 | Oryza sativa | AAB41548.1 | L07042 | Medicago sativa |
| AAF76314.1 | AF220603 | Lycopersicon esculentum | SEQ ID NO. 60 | | |
| AAK11568.1 | AF318492 | Lycopersicon hirsutum | BAA94962.1 | AB042103 | Asparagus officinalis |
| AAB47422.1 | U59318 | Lycopersicon esculentum | AAF63027.1 | AF244924 | Spinacia oleracea |
| BAA06538.1 | D31737 | Nicotiana tabacum | BAA92500.1 | AP001383 | Oryza sativa |
| AAK11567.1 | AF318491 | Lycopersicon hirsutum | AAF63026.1 | AF244923 | Spinacia oleracea |
| AAF34426.1 | AF172282 | Oryza sativa | AAF63025.1 | AF244922 | Spinacia oleracea |
| AAG25966.1 | AF302082 | Nicotiana tabacum | CRA62615.1 | X91232 | Mercurialis annua |
| SEQ ID NO. 59 | | | BAA92422.1 | AP001366 | Oryza sativa |
| CAR96385.1 | Z71703 | Beta vulgaris | BAA92497.1 | AP001383 | Oryza sativa |
| BAA33152.1 | AB008187 | Pisum sativum | AAD43561.1 | AF155124 | Gossypium hirsutum |
| CAR66233.1 | X97637 | Antirrhinum majus | BAA82306.1 | AB027752 | Nicotiana tabacum |
| AAA92823.1 | U18365 | Brassica napus | CAA66037.1 | X97351 | Populus balsamifera subsp. |
| CAA76701.1 | Y17226 | Lycopersicon esculentum | trichocarpa | | |
| AAG01534.1 | AF289467 | Nicotiana tabacum | AAD37430.1 | AF149280 | Phaseolus vulgaris |
| AAC41680.1 | L34206 | Petroselinum crispum | CAB65334.1 | AJ250121 | Picea abies |
| CAA61581.1 | X89400 | Vigna unguiculata | BAA77389.1 | AB024439 | Scutellaria baicalensis |
| CAA50038.1 | X70707 | Medicago sativa | BAA06334.1 | D30652 | Populus kitakamiensis |
| CAAR71242.1 | Y10160 | Chenopodium rubrum | CAA71492.1 | Y10466 | Spinacia oleracea |
| AAA34241.1 | M99497 | Vigna aconitifolia | CAA66034.1 | X97348 | Populus balsamifera subsp. |
| CAAR76700.1 | Y17225 | Lycopersicon esculentum | trichocarpa | | |
| CAA99991.1 | Z75661 | Sesbania rostrata | BAA06335.1 | D30653 | Populus kitakamiensis |

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|---------------|----------|--|---------------|----------|-----------------------------------|
| CAB94692.1 | AJ242742 | Ipomoea batatas | CAB56742.1 | AJ249800 | Cicer arietinum |
| CAA62226.1 | X90693 | Medicago sativa | AAG09208.1 | AF175278 | Pisum sativum |
| BAA14143.1 | D90115 | Armoracia rusticana | AAC49188.2 | U29333 | Pisum sativum |
| AAB02554.1 | L37790 | Stylosanthes humilis | AAA32913.1 | M32885 | Persea americana |
| CAA66036.1 | X97350 | Populus balsamifera subsp. trichocarpa | AAD56282.1 | AF155332 | Petunia x hybrida |
| BAA11852.1 | D83224 | Populus nigra | AAC39454.1 | AF014802 | Eschscholzia californica |
| BAA11853.1 | D83225 | Populus nigra | BAA92894.1 | AB006790 | Petunia x hybrida |
| BAA07241.1 | D38051 | Populus kitakamiensis | BAA12159.1 | D83968 | Glycine max |
| AAC05277.1 | AF049881 | Linum usitatissimum | CAA65580.1 | X96784 | Nicotiana tabacum |
| CAA66035.1 | X97349 | Populus balsamifera subsp. trichocarpa | AAB94587.1 | AF022458 | Glycine max |
| AAD37427.1 | AF149277 | Phaseolus vulgaris | BAA22423.1 | AB001380 | Glycyrrhiza echinata |
| AAB06183.1 | M37636 | Arachis hypogaea | BAA74466.1 | AB022733 | Glycyrrhiza echinata |
| AAA34108.1 | J02979 | Nicotiana tabacum | AAG44132.1 | AF218296 | Pisum sativum |
| CAA62227.1 | X90694 | Medicago sativa | BAA13076.1 | D86351 | Glycine max |
| BAA01992.1 | D11396 | Nicotiana tabacum | BAA84072.1 | AB028152 | Torenia hybrida |
| BAA92967.1 | AP001551 | Oryza sativa | AAD38930.1 | AF135485 | Glycine max |
| CAA40796.1 | X57564 | Armoracia rusticana | CAA64635.1 | X95342 | Nicotiana tabacum |
| AAC98519.1 | AF007211 | Glycine max | CAB56743.1 | AJ249801 | Cicer arietinum |
| CAA71493.1 | Y10467 | Spinacia oleracea | BAB40324.1 | AB037245 | Asparagus officinalis |
| CAA62225.1 | X90692 | Medicago sativa | SEQ ID NO. 62 | | |
| CAA50597.1 | X71593 | Lycopersicon esculentum | CAA12395.1 | AJ225087 | Vigna unguiculata |
| CAB67121.1 | Y19023 | Lycopersicon esculentum | CAA36556.1 | X52321 | Hordeum vulgare |
| AAC49819.1 | AF014468 | Oryza sativa | AAG25637.1 | AF300799 | Hordeum vulgare |
| BAA08499.1 | D49551 | Oryza sativa | AAC67245.1 | AF061203 | Hordeum vulgare |
| BAA01877.1 | D11102 | Populus kitakamiensis | AAG25638.1 | AF300800 | Hordeum vulgare |
| CAA59487.1 | X85230 | Triticum aestivum | BAB39391.1 | AB048949 | Hordeum vulgare |
| AAB97734.1 | AF014502 | Glycine max | AAK30294.1 | AF353207 | Castanea crenata |
| BAA77388.1 | AB024438 | Scutellaria baicalensis | BAA04815.1 | D21349 | Hordeum vulgare |
| SEQ ID NO. 61 | | | BAA08741.1 | D49999 | Hordeum vulgare |
| CAB43505.1 | AJ239051 | Cicer arietinum | AAC67246.1 | AF061204 | Hordeum vulgare subsp. spontaneum |
| BAA93634.1 | AB025016 | Lotus japonicus | spontaneum | | |
| BAA74465.1 | AB022732 | Glycyrrhiza echinata | CAC16789.1 | AJ301645 | Hordeum vulgare |
| BAA22422.1 | AB001379 | Glycyrrhiza echinata | AAD04259.1 | AF049098 | Trifolium repens |
| CAA10067.1 | AJ012591 | Cicer arietinum | BAA02286.1 | D12882 | Ipomoea batatas |
| CAB41490.1 | AJ238439 | Cicer arietinum | AAD04188.1 | AF026217 | Medicago sativa |
| CAA04117.1 | AJ000478 | Helianthus tuberosus | BAA09462.1 | D50866 | Glycine max |
| CAA04116.1 | AJ000477 | Helianthus tuberosus | BAA20453.1 | AB004271 | Glycine max |
| AAB94590.1 | AF022461 | Glycine max | AAG44882.1 | AF284857 | Calystegia sepium |
| | | | CAA67128.1 | X98504 | Triticum aestivum |
| | | | AAA33898.1 | L10345 | Oryza sativa |

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| CAA52895.1 | X74941 | Lycopersicon esculentum | SEQ ID NO. | 68 | AF122051 | Solanum tuberosum |
| AAD42938.1 | AF084972 | Catharanthus roseus | AAG08959.1 | 1 | AF122052 | Solanum tuberosum |
| CAA71768.1 | Y10809 | Petroselinum crispum | AAG08960.1 | 1 | AF122053 | Solanum tuberosum |
| AAA80169.1 | U10270 | Zea mays | AAG08961.1 | 1 | AF190303 | Adiantum raddianum |
| CAA71770.1 | Y10810 | Petroselinum crispum | AAF67052.1 | 1 | AF190304 | Adiantum raddianum |
| AAB40291.1 | U42208 | Oryza sativa | AAF67053.1 | 1 | AF172282 | Oryza sativa |
| CAA58772.1 | X83920 | Brassica napus | AAF34434.1 | 1 | AF190302 | Secale cereale |
| CAA88492.1 | Z48602 | Nicotiana tabacum | AAF67051.1 | 1 | AF190301 | Secale cereale |
| CAB62402.1 | Y15165 | Zea mays | AAF67050.1 | 1 | Y11414 | Oryza sativa |
| BAA10928.1 | D64051 | Triticum aestivum | CAA72217.1 | 1 | AB029160 | Glycine max |
| AAC49398.1 | U46217 | Petroselinum crispum | BAA81731.1 | 1 | AB029159 | Glycine max |
| CAA76555.1 | Y16953 | Sinapis alba | BAA81730.1 | 1 | X98308 | Lycopersicon esculentum |
| AAD42937.1 | AF084971 | Catharanthus roseus | CAA66952.1 | 1 | AF114162 | Lolium temulentum |
| CAA88493.1 | Z48603 | Nicotiana tabacum | AAD31395.1 | 1 | D88621 | Oryza sativa |
| CAA63073.1 | X92102 | Raphanus sativus | BAA23341.1 | 1 | AJ133638 | Avena sativa |
| AAA17488.1 | U07933 | Triticum aestivum | CAB40189.1 | 1 | X87690 | Hordeum vulgare |
| CAA52897.1 | X74943 | Lycopersicon esculentum | CAA61021.1 | 1 | AY008692 | Hordeum vulgare |
| AAB00098.1 | L01449 | Glycine max | AAG22863.1 | 1 | AB044084 | Triticum aestivum |
| AAA68429.1 | M63999 | Triticum aestivum | BAA96421.1 | 1 | Z13998 | Petunia x hybrida |
| AAA19103.1 | U10466 | Triticum aestivum | CAA78388.1 | 1 | AB029161 | Glycine max |
| AAA19104.1 | U10467 | Triticum aestivum | BAA81732.1 | 1 | AB029162 | Glycine max |
| AAC49558.1 | U04297 | Oryza sativa | BAA81733.2 | 2 | Y11415 | Oryza sativa |
| SEQ ID NO. | 67 | | CAA72218.1 | 1 | AB029165 | Glycine max |
| CAA10608.1 | AJ132228 | Ricinus communis | BAA81736.1 | 1 | Y11350 | Oryza sativa |
| CAA70778.1 | Y09591 | Vicia faba | CAA72185.1 | 1 | AC037425 | Oryza sativa |
| CAA07563.1 | AJ007574 | Ricinus communis | AAG13574.1 | 1 | X98355 | Oryza sativa |
| AAD16014.1 | AF080543 | Nepenthes alata | CAA67000.1 | 1 | AF198499 | Nicotiana tabacum |
| CAA70969.1 | Y09826 | Solanum tuberosum | AAG28526.1 | 1 | AB028650 | Nicotiana tabacum |
| AAD16015.1 | AF080544 | Nepenthes alata | BAA88222.1 | 1 | AF198498 | Nicotiana tabacum |
| CAA70968.1 | Y09825 | Solanum tuberosum | AAG28525.1 | 1 | Z13997 | Petunia x hybrida |
| CAA92992.1 | Z68759 | Ricinus communis | CAA78387.1 | 1 | U72762 | Nicotiana tabacum |
| AAD16013.1 | AF080542 | Nepenthes alata | AAB41101.1 | 1 | AB028651 | Nicotiana tabacum |
| AAF15945.1 | AF061435 | Vicia faba | BAA88223.1 | 1 | X99134 | Lycopersicon esculentum |
| CAA72006.1 | Y11121 | Ricinus communis | CAA67575.1 | 1 | AJ006292 | Antirrhinum majus |
| AAF15944.1 | AF061434 | Vicia faba | CAB43399.1 | 1 | AF336283 | Gossypium hirsutum |
| AAF15946.1 | AF061436 | Vicia faba | AAK19616.1 | 1 | | |
| AAB96830.1 | U64823 | Nicotiana sylvestris | SEQ ID NO. | 70 | | |
| AAB48944.1 | U31932 | Nicotiana sylvestris | CAA73067.1 | 1 | Y12464 | Sorghum bicolor |
| BAA93437.1 | AB022783 | Oryza sativa | CAA73068.1 | 1 | Y12465 | Sorghum bicolor |
| CAB42599.1 | AJ738635 | Chlorella protothecoides | | | | |

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|---------------|-------------------------------|------------|----------|---------------------------------|
| ABA011967 | Oryza sativa | AAA33917.1 | I36320 | Oryza sativa |
| ABA02482 | Oryza sativa | AAC14464.1 | I19435 | Oryza sativa |
| ABA00497 | Oryza sativa | BAA00799.1 | D00999 | Oryza sativa |
| AF141378 | Zea mays | AAA33659.1 | M63003 | Pisum sativum |
| ABA011968 | Oryza sativa | AAD48484.1 | AF170297 | Manihot esculenta |
| ABA011670 | Triticum aestivum | CAB60191.1 | AJ250667 | Ananas comosus |
| AF143743 | Lycopersicon esculentum | CAA51654.1 | X73139 | Ipomoea batatas |
| AF128443 | Glycine max | CAA39444.1 | X55974 | Nicotiana glauca |
| Y10036 | Cucumis sativus | AAB40394.1 | U80069 | Mesembryanthemum crystallinum |
| D26602 | Nicotiana tabacum | AAK06837.1 | AF328859 | Avicennia marina |
| X82548 | Hordeum vulgare | CAA60826.1 | X87372 | Lycopersicon esculentum |
| AF062479 | Oryza sativa | AAB49913.1 | U34727 | Zea mays |
| X95997 | Solanum tuberosum | CAB57993.1 | X17564 | Zea mays |
| AJ007990 | Hordeum vulgare | CAA05633.1 | AJ002604 | Pinus sylvestris |
| X65606 | Hordeum vulgare | AAD01605.1 | AF016893 | Populus tremuloides |
| U83797 | Solanum tuberosum | AAK26435.1 | AF354748 | Solanum tuberosum |
| X65604 | Hordeum vulgare | AAB92612.1 | AF037359 | Paulownia kawakami |
| U55768 | Oryza sativa | AAB66812.1 | AF009734 | Capsicum annuum |
| U73938 | Nicotiana tabacum | AAD01604.1 | AF016892 | Populus tremuloides |
| AJ005373 | Cratogeomys plantaginifolius | CAA10160.1 | AJ012739 | Cicer arietinum |
| L38855 | Glycine max | CAA10132.1 | AJ012691 | Cicer arietinum |
| D88399 | Oryza sativa | AAA34194.1 | M37150 | Lycopersicon esculentum |
| AC084763 | Oryza sativa | CAA32199.1 | X14040 | Lycopersicon esculentum |
| AB002109 | Oryza sativa | BAA19674.1 | D49485 | Solidago canadensis |
| U73939 | Nicotiana tabacum | AAD05576.1 | AF009735 | Raphanus sativus |
| Z26846 | Mesembryanthemum crystallinum | CAA37929.1 | Y13610 | Carica papaya |
| U29095 | Triticum aestivum | CAA37866.1 | X53872 | Spinacia oleracea |
| Z49233 | Chlamydomonas eugametos | AAC08581.1 | AF054150 | Zantedeschia aethiopica |
| AF186020 | Vicia faba | CAA65043.1 | X95728 | Brassica juncea |
| M94726 | Triticum aestivum | AAC25568.1 | AF071112 | Brassica rapa subsp. pekinensis |
| AF100162 | Chlamydomonas reinhardtii | BAB21760.1 | AB026724 | Oryza sativa |
| | | BAA12745.1 | D85239 | Oryza sativa |
| | | CAA65041.1 | X95726 | Brassica juncea |
| | | BAA01089.1 | D10244 | Spinacia oleracea |
| | | BAA24919.1 | AB004870 | Marchantia paleacea |
| | | AAA33728.1 | M20792 | Petunia x hybrida |
| SEQ ID NO. 71 | | | | |
| AAC04614.1 | Mesembryanthemum crystallinum | | | |
| X58578 | Pinus sylvestris | | | |
| I19434 | Oryza sativa | | | |
| D01000 | Oryza sativa | | | |
| M54936 | Zea mays | | | |
| AF034630 | Panax ginseng | | | |
| AJ307586 | Pinus sylvestris | | | |
| X17565 | Zea mays | | | |

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|---------------|----------|-------------------------------|---------------|----------|----------------------|
| BAA83689.1 | AB011968 | Oryza sativa | CAA95859.1 | Z71276 | Mangifera indica |
| BAA83688.1 | AB011967 | Oryza sativa | CAA55865.1 | X79278 | Medicago sativa |
| AAF22219.1 | AF141378 | Zea mays | BAA02111.1 | D12543 | Pisum sativum |
| BAA34675.1 | AB011670 | Triticum aestivum | CAA89049.1 | Z49190 | Beta vulgaris |
| AAB62693.1 | AF004947 | Oryza sativa | CAA98179.1 | Z73951 | Lotus japonicus |
| BAA05649.1 | D26602 | Nicotiana tabacum | BAA02437.1 | D13152 | Oryza sativa |
| CAA71142.1 | Y10036 | Cucumis sativus | CAA98177.1 | Z73949 | Lotus japonicus |
| AAD23582.1 | AF128443 | Glycine max | BAA06701.1 | D31905 | Zea mays |
| CAA65244.1 | X95997 | Solanum tuberosum | AAB97114.1 | U58853 | Glycine max |
| CAA57898.1 | X82548 | Hordeum vulgare | BAA06702.1 | D31906 | Zea mays |
| AAC99329.1 | AF062479 | Oryza sativa | CAA67153.1 | X98540 | Fagus sylvatica |
| CAA07813.1 | AJ007990 | Hordeum vulgare | BAA02110.1 | D12542 | Pisum sativum |
| CAA46554.1 | X65604 | Hordeum vulgare | CAA41966.1 | X59276 | Oryza sativa |
| AAB05457.1 | U55768 | Oryza sativa | BAA02109.1 | D12541 | Pisum sativum |
| CAA46556.1 | X65606 | Hordeum vulgare | BAA84640.1 | AB007911 | Pisum sativum |
| AAB58348.1 | U29095 | Triticum aestivum | CAA98185.1 | Z73957 | Lotus japonicus |
| CAA06503.1 | AJ005373 | Craterostigma plantagineum | CAA98186.1 | Z73958 | Lotus japonicus |
| AAA96325.1 | M94726 | Triticum aestivum | CAA98182.1 | Z73954 | Lotus japonicus |
| CAA81443.1 | Z26846 | Mesembryanthemum crystallinum | AAD48018.1 | AF165095 | Gossypium hirsutum |
| AAD00239.1 | U73938 | Nicotiana tabacum | CAA98183.1 | Z73955 | Lotus japonicus |
| BAA13608.1 | D88399 | Oryza sativa | AAD48019.1 | AF165096 | Gossypium hirsutum |
| AAB68962.1 | L38855 | Glycine max | CAA54506.1 | X77301 | Glycine max |
| AAG60195.1 | AC084763 | Oryza sativa | CAA98178.1 | Z73950 | Lotus japonicus |
| BAA19573.1 | AB002109 | Oryza sativa | BAA02108.1 | D12540 | Pisum sativum |
| CAA89202.1 | Z49233 | Chlamydomonas eugametos | AAA34253.1 | L08130 | Volvox carteri |
| AAD00240.1 | U73939 | Nicotiana tabacum | CAA98165.1 | Z73937 | Lotus japonicus |
| AAF27340.1 | AF186020 | Vicia faba | AAA90955.1 | U32185 | Glycine max |
| AAC98509.1 | AF100162 | Chlamydomonas reinhardtii | AAA63902.1 | U22433 | Zea mays |
| SEQ ID NO. 73 | | | SEQ ID NO. 75 | | |
| CAA90282.1 | Z49990 | Solanum tuberosum | CAA52069.1 | X73849 | Brassica napus |
| SEQ ID NO. 74 | | | CAA52070.1 | X73850 | Brassica napus |
| AAK15703.1 | AF327517 | Oryza sativa | CAA61111.1 | X87842 | Brassica rapa |
| BAA02904.1 | D13758 | Oryza sativa | AAC49002.1 | U17098 | Carthamus tinctorius |
| BAA02113.1 | D12545 | Pisum sativum | AAA33020.1 | M96569 | Garcinia mangostana |
| BAA02114.1 | D12546 | Pisum sativum | AAB51523.1 | U92876 | Capsicum chinense |
| CAA98180.1 | Z73952 | Lotus japonicus | AAG35064.1 | AF318288 | Carthamus tinctorius |
| BAA02112.1 | D12544 | Pisum sativum | AAA33019.1 | M96568 | Garcinia mangostana |
| CAA98181.1 | Z73953 | Lotus japonicus | AAB51524.1 | U92877 | Iris germanica |
| CAA98184.1 | Z73956 | Lotus japonicus | AAG43859.1 | AF213478 | Elaeis guineensis |

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| CAC14164.1 | AJ278479 | Brassica juncea | BAA02112.1 | D12544 | Pisum sativum |
| AAD33870.1 | AF141382 | Elaeis oleifera | CAA98184.1 | 273956 | Lotus japonicus |
| AAD33895.1 | AF143095 | Elaeis guineensis | AAK15703.1 | AF327517 | Oryza sativa |
| AAB51525.1 | U92878 | Garcinia mangostana | BAA02904.1 | D13758 | Oryza sativa |
| CAA54060.1 | X76561 | Cuphea lanceolata | BAA02111.1 | D12543 | Pisum sativum |
| AAB71729.1 | U65642 | Myristica fragrans | BAA02113.1 | D12545 | Pisum sativum |
| AAF02215.1 | AF076535 | Gossypium hirsutum | CAA98180.1 | 273952 | Lotus japonicus |
| AAD01982.1 | AF034266 | Gossypium hirsutum | BAA02114.1 | D12546 | Pisum sativum |
| AAG43858.1 | AF213477 | Iris germanica | CAA98181.1 | 273953 | Lotus japonicus |
| BAA83582.1 | AF000399 | Oryza sativa | CAA95859.1 | 271276 | Mangifera indica |
| AAG43860.1 | AF213479 | Iris tectorum | CAA55865.1 | X79278 | Medicago sativa |
| AAG43857.1 | AF213476 | Iris germanica | CAA89049.1 | 249190 | Beta vulgaris |
| AAC49783.1 | U56103 | Cuphea wrightii | CAA98179.1 | 273951 | Lotus japonicus |
| AAG43861.1 | AF213480 | Iris tectorum | BAA02437.1 | D13152 | Oryza sativa |
| CAC19934.1 | AJ131741 | Cuphea lanceolata | BAA06701.1 | D31905 | Zea mays |
| CAB60830.1 | AJ131740 | Cuphea lanceolata | BAA06702.1 | D31906 | Zea mays |
| AAC49784.1 | U56104 | Cuphea wrightii | BAA02110.1 | D12542 | Pisum sativum |
| AAD42220.1 | AF147879 | Elaeis guineensis | CAA98177.1 | 273949 | Lotus japonicus |
| AAC49151.1 | U31813 | Cinnamomum camphora | CAA41966.1 | X59276 | Oryza sativa |
| AAC49001.1 | U17097 | Umbellularia californica | AAB97114.1 | U58853 | Glycine max |
| CAA06001.1 | AJ003221 | Solanum tuberosum | CAA98185.1 | 273957 | Lotus japonicus |
| SEQ ID NO. 76 | | | CAA67153.1 | X98540 | Fagus sylvatica |
| CAA47870.1 | X67601 | Lycopersicon peruvianum | CAA98183.1 | 273955 | Lotus japonicus |
| CAA87076.1 | 246952 | Glycine max | CAA98182.1 | 273954 | Lotus japonicus |
| CAA47868.1 | X67599 | Lycopersicon esculentum | CAA54506.1 | X77301 | Glycine max |
| CAA47869.1 | X67600 | Lycopersicon peruvianum | BAA02108.1 | D12540 | Pisum sativum |
| CAA09300.1 | AJ010643 | Pisum sativum | AAD48018.1 | AF165095 | Gossypium hirsutum |
| AAF74563.1 | AF208544 | Lycopersicon peruvianum | BAA02109.1 | D12541 | Pisum sativum |
| CAA09301.1 | AJ010644 | Lycopersicon peruvianum | CAA98186.1 | 273958 | Lotus japonicus |
| BAA83711.1 | AB014484 | Pisum sativum | BAA84640.1 | AB007911 | Pisum sativum |
| CAA58117.1 | X82943 | Nicotiana tabacum | AAD48019.1 | AF165096 | Gossypium hirsutum |
| AAF37579.1 | AF235958 | Zea mays | CAA98178.1 | 273950 | Lotus japonicus |
| CAA87077.1 | 246953 | Medicago sativa | AAA63901.1 | U22432 | Zea mays |
| CAA39034.1 | X55347 | Glycine max | CAA98165.1 | 273937 | Lotus japonicus |
| BAA83710.1 | AB014483 | Lycopersicon peruvianum | AAA34253.1 | L08130 | Volvox carteri |
| CAA87080.1 | 246956 | Nicotiana tabacum | AAA90955.1 | U32185 | Glycine max |
| CAA87079.1 | 246955 | Glycine max | AAA63902.1 | U22433 | Zea mays |
| CAA87075.1 | 246951 | Glycine max | | | |
| SEQ ID NO. 78 | | | SEQ ID NO. 80 | | |
| | | | AAF98390.1 | AF287143 | Brassica napus |
| | | | BAA93039.1 | AB033758 | Citrus unshiu |

| SEQ ID NO. | Accession | Species | SEQ ID NO. | Accession | Species |
|------------|-----------|---------------------------------|------------|-----------|----------------------------|
| BAA89009.1 | AB027455 | Petunia x hybrida | BAB18104.1 | AB042714 | Chlamydomonas reinhardtii |
| AAF61647.1 | AF190634 | Nicotiana tabacum | BAB18105.1 | AB042715 | Chlamydomonas reinhardtii |
| BAA36423.1 | AB013598 | Verbena x hybrida | CAB82852.1 | Z30329 | Mesembryanthemum crystalli |
| BAA36421.1 | AB013596 | Perilla frutescens | CAA50374.1 | X71057 | Nicotiana tabacum |
| BAA36422.1 | AB013597 | Perilla frutescens | CAA82993.1 | Z30332 | Spinacia oleracea |
| AAA59054.1 | L34847 | Zea mays | AAA50304.1 | M92989 | Pisum sativum |
| AAF17077.1 | AF199453 | Sorghum bicolor | BAB03409.1 | AP002816 | Oryza sativa |
| AAB36653.1 | U32644 | Nicotiana tabacum | AAD37166.1 | AF132743 | Oryza sativa |
| AAB36652.1 | U32643 | Nicotiana tabacum | CAA82994.1 | Z30333 | Mesembryanthemum crystalli |
| AAK28303.1 | AF346431 | Nicotiana tabacum | AAF19403.1 | AF203481 | Lycopersicon esculentum |
| AAK28304.1 | AF346432 | Nicotiana tabacum | AAF19402.1 | AF203480 | Lycopersicon esculentum |
| BAA83484.1 | AB031274 | Scutellaria baicalensis | AAD23582.1 | AF128443 | Glycine max |
| CAA59450.1 | X85138 | Lycopersicon esculentum | BAA05649.1 | D26602 | Nicotiana tabacum |
| BAA12737.1 | D85186 | Gentiana triflora | CAA71142.1 | Y10036 | Cucumis sativus |
| CAB56231.1 | Y18871 | Dorotheanthus bellidiformis | CAA65244.1 | X95997 | Solanum tuberosum |
| AAD21086.1 | AF127218 | Forsythia x intermedia | AAF05112.1 | AF158091 | Mesembryanthemum crystalli |
| AAB48444.1 | U82367 | Solanum tuberosum | BAA96628.1 | AF002482 | Oryza sativa |
| BAA19659.1 | AB002818 | Perilla frutescens | CAA57898.1 | X82548 | Hordeum vulgare |
| BAB41017.1 | AB047090 | Vitis labrusca x Vitis vinifera | AAF06970.1 | AF162662 | Kalanchoe fedtschenkoi |
| CAA31855.1 | X13500 | Zea mays | AAF06969.1 | AF162661 | Kalanchoe fedtschenkoi |
| CAA54611.1 | X77461 | Manihot esculenta | BAA96593.1 | AP002481 | Oryza sativa |
| AAD04166.1 | AF101972 | Phaseolus lunatus | CAA46556.1 | X65606 | Hordeum vulgare |
| BAA89008.1 | AB027454 | Petunia x hybrida | CAA07813.1 | AJ007990 | Hordeum vulgare |
| AAB86473.1 | AF028237 | Ipomoea purpurea | CAA46554.1 | X65604 | Hordeum vulgare |
| BAA90787.1 | AB038248 | Ipomoea batatas | AAC99329.1 | AF062479 | Oryza sativa |
| | | | AAF66637.1 | AF143505 | Lycopersicon esculentum |
| SEQ ID NO. | 81 | | SEQ ID NO. | 83 | |
| ARG43283.1 | AF139210 | Oryza sativa | AAB86473.1 | AF028237 | Ipomoea purpurea |
| AAD37698.1 | AF145729 | Oryza sativa | AAF61647.1 | AF190634 | Nicotiana tabacum |
| AAF01765.1 | AF184278 | Glycine max | CAA54558.1 | X77369 | Solanum melongena |
| BAA93463.1 | AB028075 | Physcomitrella patens | BAA89008.1 | AB027454 | Petunia x hybrida |
| CAA62608.1 | X91212 | Lycopersicon esculentum | BAA90787.1 | AB038248 | Ipomoea batatas |
| BAA93462.1 | AB028074 | Physcomitrella patens | AAF17077.1 | AF199453 | Sorghum bicolor |
| AAA63768.2 | AF339748 | Helianthus annuus | CAA54612.1 | X77462 | Manihot esculenta |
| BAA93467.1 | AB028079 | Physcomitrella patens | BAA12737.1 | D85186 | Gentiana triflora |
| AAD38144.1 | AF139497 | Prunus armeniaca | | | |
| BAA21017.1 | D26578 | Daucus carota | | | |
| CAA06728.1 | AJ005833 | Craterostigma plantagineum | | | |
| CAA06717.1 | AJ005820 | Craterostigma plantagineum | | | |
| AAD37700.1 | AF145731 | Oryza sativa | | | |
| BAA93464.1 | AB028076 | Physcomitrella patens | | | |

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|---------------|----------|---------------------------------|---------------|----------|-------------------------------|
| BAA83484.1 | AB031274 | Scutellaria baicalensis | AA80225.1 | U72723 | Oryza longistaminata |
| CAA54614.1 | X77464 | Manihot esculenta | AA82755.1 | U72725 | Oryza longistaminata |
| AAD21086.1 | AF127218 | Forsythia x intermedia | AAC78595.1 | AF053997 | Lycopersicon esculentum |
| BAA93039.1 | AB033758 | Citrus unshiu | AAC78592.1 | AF053994 | Lycopersicon esculentum |
| AAB36652.1 | U32643 | Nicotiana tabacum | CAA05276.1 | AJ002236 | Lycopersicon pimpinellifol |
| AAF98390.1 | AF287143 | Brassica napus | AAC78594.1 | AF053996 | Lycopersicon pimpinellifol |
| AAK28304.1 | AF346432 | Nicotiana tabacum | | | |
| CRA30760.1 | X07937 | Zea mays | SEQ ID NO. 85 | | |
| BAA89009.1 | AB027455 | Petunia x hybrida | BAA32827.1 | AB012708 | Daucus carota |
| AAD04166.1 | AF101972 | Phaseolus lunatus | | | |
| CRA31855.1 | X13500 | Zea mays | SEQ ID NO. 86 | | |
| AAK16410.1 | AF320086 | Zea mays | AA52992.1 | U77888 | Ipomoea nil |
| AAD51778.1 | AF116858 | Phaseolus vulgaris | AA59906.1 | AF197947 | Glycine max |
| CRA30761.1 | X07940 | Zea mays | AAC36318.1 | AF053127 | Malus x domestica |
| BAA19155.1 | AB000623 | Nicotiana tabacum | AAE91323.1 | AF244889 | Glycine max |
| BAB41017.1 | AB047090 | Vitis labrusca x Vitis vinifera | AAE91324.1 | AF244890 | Glycine max |
| AAB36653.1 | U32644 | Nicotiana tabacum | AAB36558.1 | U77888 | Ipomoea nil |
| CAB56231.1 | Y18871 | Dortheanthus bellidiformis | BAA83373.1 | AP000391 | Oryza sativa |
| AAK28303.1 | AF346431 | Nicotiana tabacum | BAA84787.1 | AP000559 | Oryza sativa |
| CRA59450.1 | X85138 | Lycopersicon esculentum | AAE91322.1 | AF244888 | Glycine max |
| BAB41020.1 | AB047093 | Vitis vinifera | AAE5905.1 | AF197946 | Glycine max |
| BAB41022.1 | AB047095 | Vitis vinifera | AAB61708.1 | U93048 | Daucus carota |
| BAB41024.1 | AB047097 | Vitis vinifera | CAC20842.1 | XJ250467 | Pinus sylvestris |
| BAB41026.1 | AB047099 | Vitis vinifera | CAA61510.1 | X89226 | Oryza sativa |
| BAB41025.1 | AB047098 | Vitis vinifera | AAE52994.1 | U77888 | Ipomoea nil |
| AAE81682.1 | AF000371 | Vitis vinifera | AAE34426.1 | AF172282 | Oryza sativa |
| BAB41023.1 | AB047096 | Vitis vinifera | AAE66615.1 | AF142596 | Nicotiana tabacum |
| AAE81683.1 | AF000372 | Vitis vinifera | AAE82755.1 | U72725 | Oryza longistaminata |
| BAB41021.1 | AB047094 | Vitis vinifera | AAK21965.1 | AY028699 | Brassica napus |
| | | | AAE16628.1 | AY007545 | Brassica napus |
| | | | BAA94509.1 | AB041503 | Populus nigra |
| | | | BAA94510.1 | AB041504 | Populus nigra |
| | | | CAB51836.1 | AJ243961 | Oryza sativa |
| SEQ ID NO. 84 | | | SEQ ID NO. 87 | | |
| AAC36318.1 | AF053127 | Malus x domestica | CAA06486.1 | AJ005340 | Linum usitatissimum |
| AAC78593.1 | AF053995 | Lycopersicon esculentum | | | |
| AAC78596.1 | AF053998 | Lycopersicon esculentum | SEQ ID NO. 88 | | |
| AAB36558.1 | U77888 | Ipomoea nil | CAC12822.1 | AJ299252 | Nicotiana tabacum |
| CAB55399.1 | AL117264 | Oryza sativa | AAC24587.1 | AF071893 | Prunus armeniaca |
| CAA61510.1 | X89226 | Oryza sativa | AAE63205.1 | AF245119 | Mesembryanthemum crystallinum |
| AAD50430.1 | AF166121 | Hordeum vulgare | | | |
| AAF34426.1 | AF172282 | Oryza sativa | | | |
| AAC78591.1 | AF053993 | Lycopersicon esculentum | | | |
| AAC49123.1 | U37133 | Oryza sativa | | | |

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|------------|----------|---------------------|---------------|----------|-------------------------------|
| AAG43545.1 | AF211527 | Nicotiana tabacum | AAC64201.1 | AF096776 | Lycopersicon esculentum |
| BAA07321.1 | D38123 | Nicotiana tabacum | CAB43197.1 | AJ239068 | Lycopersicon esculentum |
| CAB96900.1 | AJ251250 | Catharanthus roseus | AAF35902.1 | AF230333 | Zinnia elegans |
| CAB96899.1 | AJ251249 | Catharanthus roseus | AAB40636.1 | U64892 | Pinus taeda |
| BAB03248.1 | AB037183 | Oryza sativa | AAD49956.1 | AF167360 | Rumex palustris |
| BAB16083.1 | AB036883 | Oryza sativa | AAB38074.1 | U30477 | Oryza sativa |
| AAF23899.1 | AF193803 | Oryza sativa | ARG32921.1 | AF184233 | Lycopersicon esculentum |
| AAF76898.1 | AF274033 | Atriplex hortensis | AAF17570.1 | AF202119 | Marsilea quadrifolia |
| AAC62619.1 | AF057373 | Nicotiana tabacum | AAC96080.1 | AF049353 | Nicotiana tabacum |
| BAA78738.1 | AB023482 | Oryza sativa | AAF32411.1 | AF230278 | Triphysaria versicolor |
| AAG43548.1 | AF211530 | Nicotiana tabacum | CAC19183.1 | AJ291816 | Cicer arietinum |
| AAG43549.1 | AF211531 | Nicotiana tabacum | BAB32732.1 | AB049406 | Eustoma grandiflorum |
| BAA99376.1 | AP002526 | Oryza sativa | AAD13633.1 | AF059489 | Lycopersicon esculentum |
| AAD39439.1 | AF132001 | Petunia x hybrida | AAF62180.1 | AF247162 | Oryza sativa |
| | | | AAF17571.1 | AF202120 | Regnellidium diphyllum |
| | | | AAF62181.1 | AF247163 | Oryza sativa |
| | | | CAC06433.1 | AJ276007 | Festuca pratensis |
| | | | AAC96077.1 | AF049350 | Nicotiana tabacum |
| | | | AAG01875.1 | AF291659 | Striga asiatica |
| | | | BAA88200.1 | AP000837 | Oryza sativa |
| | | | AAC96079.1 | AF049352 | Nicotiana tabacum |
| | | | AAB37749.1 | U30460 | Cucumis sativus |
| | | | AAC96078.1 | AF049351 | Nicotiana tabacum |
| | | | AAG32920.1 | AF184232 | Lycopersicon esculentum |
| | | | | | |
| | | | SEQ ID NO. 90 | | |
| | | | CAC12822.1 | AJ299252 | Nicotiana tabacum |
| | | | AAC24587.1 | AF071893 | Prunus armeniaca |
| | | | AAF23899.1 | AF193803 | Oryza sativa |
| | | | AAF76898.1 | AF274033 | Atriplex hortensis |
| | | | AAF63205.1 | AF245119 | Mesembryanthemum crystallinum |
| | | | BAB16083.1 | AB036883 | Oryza sativa |
| | | | CAB96900.1 | AJ251250 | Catharanthus roseus |
| | | | CAB96899.1 | AJ251249 | Catharanthus roseus |
| | | | BAA78738.1 | AB023482 | Oryza sativa |
| | | | BAA99376.1 | AF002526 | Oryza sativa |
| | | | AAG32659.1 | AF253971 | Picea abies |
| | | | | | |
| | | | SEQ ID NO. 91 | | |
| | | | AAG13983.1 | AF297522 | Prunus avium |
| | | | AAC96080.1 | AF049353 | Nicotiana tabacum |

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|------------|----------|-------------------------|---------------|----------|-----------------------------|
| AAF32411.1 | AF230278 | Triphysaria versicolor | AB37749.1 | U30460 | Cucumis sativus |
| AAF32409.1 | AF230276 | Triphysaria versicolor | AAC96077.1 | AF049350 | Nicotiana tabacum |
| AAF35901.1 | AF230332 | Zinnia elegans | CAA69105.1 | Y07782 | Oryza sativa |
| AAF35902.1 | AF230333 | Zinnia elegans | AAC96078.1 | AF049351 | Nicotiana tabacum |
| AAD47901.1 | AF085330 | Pinus taeda | AAG01875.1 | AF291659 | Striga asiatica |
| AAB40635.1 | U64891 | Pinus taeda | AAC96079.1 | AF049352 | Nicotiana tabacum |
| AAG32921.1 | AF184233 | Lycopersicon esculentum | SEQ ID NO. 92 | | |
| CAC19184.1 | AJ291817 | Cicer arietinum | AAA17732.1 | L19074 | Catharanthus roseus |
| AAG13982.1 | AF297521 | Prunus avium | AAB94586.1 | AF022457 | Glycine max |
| AAB40637.1 | U64893 | Pinus taeda | CAAB9260.1 | 249263 | Pisum sativum |
| AAB40634.1 | U64890 | Pinus taeda | CAB43505.1 | AJ239051 | Cicer arietinum |
| AAC33529.1 | U93167 | Prunus armeniaca | AAB94587.1 | AF022458 | Glycine max |
| AAF21101.1 | AF159563 | Fragaria x ananassa | AAB37231.1 | U34744 | Phalaenopsis sp. SM9108 |
| BAB19676.1 | AB029083 | Prunus persica | BAA84071.1 | AB028151 | Antirrhinum majus |
| AAB40636.1 | U64892 | Pinus taeda | BAA22423.1 | AB001380 | Glycyrrhiza echinata |
| AAC96081.1 | AF049354 | Nicotiana tabacum | CAA83941.1 | Z33875 | Mentha x piperita |
| AAC33530.1 | AF038815 | Prunus armeniaca | AAG09208.1 | AF175278 | Pisum sativum |
| CAB43197.1 | AJ239068 | Lycopersicon esculentum | SEQ ID NO. 93 | | |
| AAC64201.1 | AF096776 | Lycopersicon esculentum | SEQ ID NO. 93 | | |
| AAB37746.1 | U30382 | Cucumis sativus | AAC33228.2 | AF305070 | Chlamydomonas reinhardtii |
| AAD13633.1 | AF059489 | Lycopersicon esculentum | BAA96166.1 | AF002092 | Oryza sativa |
| AAB81662.1 | U85246 | Oryza sativa | SEQ ID NO. 96 | | |
| AAD49956.1 | AF167360 | Rumex palustris | CAA59450.1 | X85138 | Lycopersicon esculentum |
| CAC19183.1 | AJ291816 | Cicer arietinum | AAB36653.1 | U32644 | Nicotiana tabacum |
| AAF62180.1 | AF247162 | Oryza sativa | AAK28303.1 | AF346431 | Nicotiana tabacum |
| AAC39512.1 | AF043284 | Gossypium hirsutum | AAB36652.1 | U32643 | Nicotiana tabacum |
| AAB38074.1 | U30477 | Oryza sativa | AAK28304.1 | AF346432 | Nicotiana tabacum |
| BAB32732.1 | AB049406 | Eustoma grandiflorum | CAB56231.1 | Y18871 | Dorotheanthus bellidiformis |
| AAF17570.1 | AF202119 | Marsilea quadrifolia | BAA83484.1 | AB031274 | Scutellaria baicalensis |
| CAB46492.1 | AJ243340 | Lycopersicon esculentum | AAB48444.1 | U82367 | Solanum tuberosum |
| CAC06433.1 | AJ276007 | Festuca pratensis | AAB62270.1 | AF006081 | Solanum berthaultii |
| BAA88200.1 | AF000837 | Oryza sativa | AAF61647.1 | AF190634 | Nicotiana tabacum |
| AAD13632.1 | AF059488 | Lycopersicon esculentum | CAA54612.1 | X77462 | Manihot esculenta |
| AAF32410.1 | AF230277 | Triphysaria versicolor | BAB41021.1 | AB047094 | Vitis vinifera |
| AAC63088.1 | U82123 | Lycopersicon esculentum | BAB41019.1 | AB047092 | Vitis vinifera |
| AAF62182.1 | AF247164 | Oryza sativa | AAD04166.1 | AF101972 | Phaseolus lunatus |
| AAG01874.1 | AF291658 | Striga asiatica | BAB41023.1 | AB047096 | Vitis vinifera |
| AAF62181.1 | AF247163 | Oryza sativa | BAB41025.1 | AB047098 | Vitis vinifera |
| CAA06271.2 | AJ004997 | Lycopersicon esculentum | AAF98390.1 | AF287143 | Brassica napus |
| AAF17571.1 | AF202120 | Regnellidium diphyllum | | | |
| CAA04385.1 | AJ000885 | Brassica napus | | | |

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|----------------|----------|---------------------------------|----------------|----------|---------------------------|
| AAD21086.1 | AF127218 | Forsythia x intermedia | CAA65533.1 | X96758 | Zea mays |
| AAB81683.1 | AF000372 | Vitis vinifera | SEQ ID NO. 101 | | |
| BAB41017.1 | AB047090 | Vitis labrusca x Vitis vinifera | BAA85215.1 | AP000570 | Oryza sativa |
| BAB41020.1 | AB047093 | Vitis vinifera | AAA80586.1 | U19490 | Chlamydomonas reinhardtii |
| BAB41026.1 | AB047099 | Vitis vinifera | AAA80216.1 | U19484 | Chlamydomonas reinhardtii |
| BAB41024.1 | AB047097 | Vitis vinifera | | | |
| BAB41022.1 | AB047095 | Vitis vinifera | SEQ ID NO. 102 | | |
| AAB81682.1 | AF000371 | Vitis vinifera | AAB07452.1 | U65890 | Brassica napus |
| BAB41018.1 | AB047091 | Vitis labrusca x Vitis vinifera | APB63591.1 | AF009413 | Oryza sativa |
| AAF17077.1 | AF199453 | Sorghum bicolor | AAB59307.1 | M87646 | Spinacia oleracea |
| CAA54611.1 | X77461 | Manihot esculenta | AAF60293.1 | AF233745 | Lycopersicon esculentum |
| BAA89009.1 | AB027455 | Petunia x hybrida | | | |
| BAA93039.1 | AB033758 | Citrus unshiu | SEQ ID NO. 103 | | |
| CAA54609.1 | X77459 | Manihot esculenta | AAG25928.1 | AF260919 | Petunia x hybrida |
| BAA89008.1 | AB027454 | Petunia x hybrida | AAG25927.1 | AF260918 | Petunia x hybrida |
| BAA19659.1 | AB002818 | Perilla frutescens | AAC28907.1 | U18349 | Phaseolus vulgaris |
| CAA54614.1 | X77464 | Manihot esculenta | AAB00686.1 | U18348 | Phaseolus vulgaris |
| | | | CAB92300.1 | AJ251719 | Zea mays |
| SEQ ID NO. 99 | | | AAD15818.1 | AF061107 | Zea mays |
| BAB20862.1 | AB029512 | Solanum tuberosum | AAC49219.1 | U39860 | Oryza sativa |
| AAC25636.1 | AF044173 | Solanum tuberosum | AAC49216.1 | U39865 | Oryza officinalis |
| BAA03542.1 | D14722 | Spinacia oleracea | AAC39455.1 | AF020545 | Petunia x hybrida |
| CAA47329.1 | X66860 | Spinacia oleracea | AAC49212.1 | U39863 | Oryza australiensis |
| BAB20863.1 | AB029513 | Solanum tuberosum | AAC49213.1 | U39864 | Oryza eichingeri |
| AAD23909.1 | AF073697 | Oryza sativa | AAD56411.1 | AF185269 | Tulipa gesneriana |
| BAA05965.1 | D28777 | Citrullus lanatus | | | |
| BAB20861.1 | AB029511 | Solanum tuberosum | SEQ ID NO. 104 | | |
| CAA59798.1 | X85803 | Zea mays | AAA33041.1 | M33148 | Citrullus lanatus |
| BAA93051.1 | AB040503 | Allium tuberosum | AAC41647.1 | L31900 | Cucumis sativus |
| AAD23907.1 | AF073695 | Oryza sativa | AAB99754.1 | AF020270 | Medicago sativa |
| AAC25635.1 | AF044172 | Solanum tuberosum | BAA12870.1 | D85763 | Oryza sativa |
| CAC12819.1 | AJ299249 | Nicotiana tabacum | CAB43995.1 | AJ242713 | Brassica napus |
| CAC09469.1 | AL442113 | Oryza sativa | CAB43994.1 | AJ242712 | Brassica napus |
| BAA07177.1 | D37963 | Spinacia oleracea | CAA63268.1 | X92512 | Brassica napus |
| CAA06819.1 | AJ006024 | Cicer arletinum | CAA55383.1 | X78800 | Eucalyptus gunnii |
| AAD23908.1 | AF073696 | Oryza sativa | AAD56659.1 | AF180335 | Glycine max |
| AAD23910.1 | AF073698 | Oryza sativa | AAF69802.1 | AF195869 | Vitis vinifera |
| AAF78529.1 | AF195239 | Pyrus pyrifolia | AAB99755.1 | AF020271 | Medicago sativa |
| | | | AAB99757.1 | AF020273 | Medicago sativa |
| SEQ ID NO. 100 | | | AAC28106.1 | AF079850 | Pisum sativum |
| AAB39510.1 | U53345 | Camptotheca acuminata | | | |

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|----------------|----------|---------------------------|----------------|----------|---------------------------|
| AAC24955.1 | AF068686 | Glycine max | AAA81889.1 | U02494 | Solanum tuberosum |
| CAA61621.1 | X89451 | Brassica napus | AAA81891.1 | U02496 | Solanum tuberosum |
| AAA84971.1 | U40212 | Chlamydomonas reinhardtii | AAA81892.1 | U02497 | Solanum tuberosum |
| CAB45387.1 | AJ006974 | Plastid Nicotiana tabacum | AAA81890.1 | U02495 | Solanum tuberosum |
| AAD10324.1 | U42979 | Chlamydomonas reinhardtii | BAA85201.1 | AP000570 | Oryza sativa |
| AAB39506.1 | U40465 | Chlamydomonas reinhardtii | BAA84626.1 | AP000492 | Oryza sativa |
| CAB61751.1 | AJ275317 | Cicer arietinum | AAA81893.1 | U02498 | Solanum tuberosum |
| AAC19244.1 | AF068687 | Glycine max | BAA84627.1 | AP000492 | Oryza sativa |
| AAC19136.1 | AF068688 | Glycine max | BAA85202.1 | AP000570 | Oryza sativa |
| AAC19137.1 | AF068689 | Glycine max | AAB02006.1 | U57350 | Nicotiana tabacum |
| AAF27629.1 | AF217211 | Medicago truncatula | SEQ ID NO. 111 | | |
| AAF35861.1 | AF220497 | Medicago truncatula | AAB17501.2 | U43034 | Zea mays |
| AAB38970.1 | U80676 | Botryococcus braunii | SEQ ID NO. 112 | | |
| AAA62697.1 | M55684 | Hordeum vulgare | CAA71881.1 | Y10990 | Nicotiana tabacum |
| BAA02971.1 | D13817 | Oryza sativa | SEQ ID NO. 113 | | |
| AAK26431.1 | AF353203 | Oryza sativa | CAA70700.1 | Y09506 | Nicotiana tabacum |
| AAG13573.1 | AC037425 | Oryza sativa | CAA77134.1 | Y18349 | Oryza sativa |
| AAA62696.1 | M55685 | Hordeum vulgare | CAA77133.1 | Y18349 | Oryza sativa |
| AAB64290.1 | AF007581 | Zea mays | SEQ ID NO. 114 | | |
| CAA71611.1 | Y10602 | Lycopersicon esculentum | AAF20949.1 | AF207691 | Daucus carota |
| CAA70100.1 | Y08887 | Lycopersicon esculentum | AAB04951.1 | U36752 | Chlamydomonas reinhardtii |
| AAB99756.1 | AF020272 | Medicago sativa | AAC60560.2 | S63824 | Pinus mugo |
| CAC12826.1 | AJ299256 | Nicotiana tabacum | AAF89208.1 | AF279251 | Vigna radiata |
| AAC21564.1 | AF067859 | Solanum tuberosum | BAA21089.1 | D50085 | Cucumis sativus |
| BAA90618.1 | AF001129 | Oryza sativa | BAA31693.1 | AB007321 | Marchantia paleacea |
| CAA70101.1 | Y08888 | Lycopersicon esculentum | AAB86734.1 | AF027356 | Pinus strobus |
| CAA71612.1 | Y10603 | Lycopersicon esculentum | AAF82471.1 | AF243520 | Lycopersicon esculentum |
| CAA77808.1 | Z11754 | Zea mays | AAF82475.1 | AF243522 | Lycopersicon esculentum |
| AAA87008.1 | U22533 | Flaveria trinervia | AAD20020.1 | AF126871 | Chloroplast Vigna radiata |
| SEQ ID NO. 105 | | | AAF82474.1 | AF243524 | Lycopersicon esculentum |
| AAG33228.2 | AF305070 | Chlamydomonas reinhardtii | SEQ ID NO. 116 | | |
| BAA96166.1 | AP002092 | Oryza sativa | CAA73171.1 | Y12599 | Apium graveolens |
| SEQ ID NO. 106 | | | AAK29454.1 | AF352251 | Lens culinaris |
| CAB85464.1 | AJ277210 | Avena sativa | CAA40362.1 | X57077 | Zea mays |
| SEQ ID NO. 107 | | | BAA25203.1 | D87064 | Triticum aestivum |
| BAA09852.1 | D63781 | Glycine max | AAK29455.1 | AF352252 | Lens culinaris |
| CAA55293.1 | X78547 | Glycine max | | | |
| CAA55294.1 | X78548 | Glycine max | | | |

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|----------------|----------|---------------------------|----------------|------------|----------|-------------------------|
| AAK29450.1 | AF352247 | Pisum sativum | SEQ ID NO. 120 | AAF22556.1 | AF161711 | Pimpinella brachycarpa |
| AAK29456.1 | AF352253 | Lens culinaris | CAA67600.1 | X99210 | X99210 | Lycopersicon esculentum |
| BAA8671.1 | AB029614 | Nicotiana tabacum | CAA64614.1 | X95296 | X95296 | Lycopersicon esculentum |
| AAK29453.1 | AF352250 | Lathyrus sativus | CAA78386.1 | Z13996 | Z13996 | Petunia x hybrida |
| AAK29452.1 | AF352249 | Lathyrus sativus | CAB43399.1 | AJ006292 | AJ006292 | Antirrhinum majus |
| AAK29449.1 | AF352246 | Pisum sativum | CAA78387.1 | Z13997 | Z13997 | Petunia x hybrida |
| BAA25204.1 | D87065 | Triticum aestivum | BAA88221.1 | AB028649 | AB028649 | Nicotiana tabacum |
| AAK29451.1 | AF352248 | Pisum sativum | BAA88224.1 | AB028652 | AB028652 | Nicotiana tabacum |
| CAA12232.1 | AJ224933 | Lycopersicon esculentum | AAB41101.1 | U72762 | U72762 | Nicotiana tabacum |
| AAB86857.1 | AF031547 | Fritillaria agrestis | BAA88223.1 | AB028651 | AB028651 | Nicotiana tabacum |
| AAC41651.1 | L29456 | Nicotiana tabacum | BAA88222.1 | AB028650 | AB028650 | Nicotiana tabacum |
| AAA50578.1 | U03391 | Lycopersicon esculentum | CAA68235.1 | X99973 | X99973 | Hordeum vulgare |
| BAA87331.1 | AB012694 | Lilium longiflorum | CAA66952.1 | X98308 | X98308 | Lycopersicon esculentum |
| AAD41007.1 | AF107024 | Triticum aestivum | SEQ ID NO. 121 | | | |
| AAF27930.1 | AF222804 | Euphorbia esula | CAA78387.1 | Z13997 | Z13997 | Petunia x hybrida |
| CAA29123.1 | X05636 | Pisum sativum | BAA81736.1 | AB029165 | AB029165 | Glycine max |
| AAA34246.1 | L07947 | Volvox carteri | BAA81732.1 | AB029161 | AB029161 | Glycine max |
| CAA07233.1 | AJ006767 | Cicer arietinum | BAA81731.1 | AB029160 | AB029160 | Glycine max |
| AAA50303.1 | L34578 | Pisum sativum | BAA81730.1 | AB029159 | AB029159 | Glycine max |
| AAD41008.1 | AF107026 | Triticum aestivum | BAA88221.1 | AB028649 | AB028649 | Nicotiana tabacum |
| AAA74723.1 | L07946 | Volvox carteri | BAA88224.1 | AB028652 | AB028652 | Nicotiana tabacum |
| CAA42529.2 | X59872 | Triticum aestivum | CAA66952.1 | X98308 | X98308 | Lycopersicon esculentum |
| AAD41005.1 | AF107022 | Triticum aestivum | BAA81733.2 | AB029162 | AB029162 | Glycine max |
| SEQ ID NO. 119 | | | CAA72217.1 | Y11414 | Y11414 | Oryza sativa |
| CAA07568.1 | AJ007580 | Ribes nigrum | BAA88222.1 | AB028650 | AB028650 | Nicotiana tabacum |
| CAA67107.1 | X98474 | Solanum tuberosum | AAB41101.1 | U72762 | U72762 | Nicotiana tabacum |
| BAA92520.1 | AF001383 | Oryza sativa | BAA88223.1 | AB028651 | AB028651 | Nicotiana tabacum |
| CAA72107.1 | Y11220 | Solanum tuberosum | CAA72185.1 | Y11350 | Y11350 | Oryza sativa |
| AAB71744.1 | U75346 | Chlamydomonas reinhardtii | AAG13574.1 | AC037425 | AC037425 | Oryza sativa |
| AAB71743.1 | U75345 | Chlamydomonas reinhardtii | AAK19616.1 | AF336283 | AF336283 | Gossypium hirsutum |
| BAA31583.1 | AB016064 | Zea mays | CAA78386.1 | Z13996 | Z13996 | Petunia x hybrida |
| BAA31582.1 | AB016063 | Glycine max | CAA72218.1 | Y11415 | Y11415 | Oryza sativa |
| BAA31584.1 | AB016065 | Oryza sativa | CAA68235.1 | X99973 | X99973 | Hordeum vulgare |
| CAB61741.1 | AJ275306 | Cicer arietinum | AAA33500.1 | M73028 | M73028 | Zea mays |
| CAA69726.1 | Y08499 | Betula pendula | CAA67600.1 | X99210 | X99210 | Lycopersicon esculentum |
| CAC12820.1 | AJ299250 | Nicotiana tabacum | AAG36774.1 | AF210616 | AF210616 | Zea mays |
| BAA08105.1 | D45075 | Panicum miliaceum | AAF22256.1 | AF161711 | AF161711 | Pimpinella brachycarpa |
| BAA08104.1 | D45074 | Panicum miliaceum | CAA72187.1 | Y11352 | Y11352 | Oryza sativa |
| BAA08103.1 | D45073 | Panicum miliaceum | | | | |
| CAC27140.1 | AJ132535 | Picea abies | | | | |

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|----------------|----------|-------------------------|----------------|----------|---------------------------|
| CAB43399.1 | AJ006292 | Antirrhinum majus | AAK19618.1 | AF336285 | Gossypium hirsutum |
| AAK19615.1 | AF336282 | Gossypium hirsutum | AAK19611.1 | AF336278 | Gossypium hirsutum |
| AAK19618.1 | AF336285 | Gossypium hirsutum | AAK19619.1 | AF336286 | Gossypium hirsutum |
| CAA72186.1 | Y11351 | Oryza sativa | AAK19615.1 | AF336282 | Gossypium hirsutum |
| CAA64614.1 | X95296 | Lycopersicon esculentum | CAA64614.1 | X95296 | Lycopersicon esculentum |
| CAA50221.1 | X70876 | Hordeum vulgare | BAA23338.1 | D88618 | Oryza sativa |
| BAA23338.1 | D88618 | Oryza sativa | BAA23337.1 | D88617 | Oryza sativa |
| AAK19619.1 | AF336286 | Gossypium hirsutum | CAA67575.1 | X99134 | Lycopersicon esculentum |
| AAK19611.1 | AF336278 | Gossypium hirsutum | CAA65525.1 | X96749 | Oryza sativa |
| BAA23337.1 | D88617 | Oryza sativa | CAA50221.1 | X70876 | Hordeum vulgare |
| CAA65525.1 | X96749 | Oryza sativa | AAK19617.1 | AF336284 | Gossypium hirsutum |
| AAK19617.1 | AF336284 | Gossypium hirsutum | CAA50222.1 | X70877 | Hordeum vulgare |
| CAA67575.1 | X99134 | Lycopersicon esculentum | CAA50224.1 | X70879 | Hordeum vulgare |
| CAA50224.1 | X70879 | Hordeum vulgare | | | |
| SEQ ID NO. 122 | | | SEQ ID NO. 125 | | |
| BAA8222.1 | AB028650 | Nicotiana tabacum | BAA92155.1 | AB007818 | Citrus unshiu |
| BAA8221.1 | AB028649 | Nicotiana tabacum | AAB02879.1 | M37152 | Nicotiana tabacum |
| BAA8224.1 | AB028652 | Nicotiana tabacum | BAB16425.1 | AB041513 | Nicotiana tabacum |
| CAA78387.1 | Z13997 | Petunia x hybrida | | | |
| CAA66952.1 | X98308 | Lycopersicon esculentum | SEQ ID NO. 126 | | |
| AAB41101.1 | U72762 | Nicotiana tabacum | CAA68993.1 | Y07721 | Petunia x hybrida |
| BAA8223.1 | AB028651 | Nicotiana tabacum | | | |
| BAA81733.2 | AB029162 | Glycine max | SEQ ID NO. 134 | | |
| BAA81731.1 | AB029160 | Glycine max | AAB26960.1 | U63726 | Glycine max |
| BAA81730.1 | AB029159 | Glycine max | | | |
| BAA81736.1 | AB029165 | Glycine max | SEQ ID NO. 135 | | |
| CAA72217.1 | Y11414 | Oryza sativa | CAA77403.1 | Z00044 | Plastid Nicotiana tabacum |
| BAA81732.1 | AB029161 | Glycine max | | | |
| CAA72185.1 | Y11350 | Oryza sativa | SEQ ID NO. 136 | | |
| AAG13574.1 | AC037425 | Oryza sativa | AAB36543.1 | U77935 | Phaseolus vulgaris |
| CAA72218.1 | Y11415 | Oryza sativa | | | |
| CAA78386.1 | Z13996 | Petunia x hybrida | SEQ ID NO. 137 | | |
| CAB43399.1 | AJ006292 | Antirrhinum majus | AAC77928.1 | AF084202 | Medicago sativa |
| AAK19616.1 | AF336283 | Gossypium hirsutum | BAA07208.1 | D38011 | Oryza sativa |
| AAG36774.1 | AF210616 | Zea mays | | | |
| AAA33500.1 | M73028 | Zea mays | SEQ ID NO. 138 | | |
| CAA68235.1 | X99973 | Hordeum vulgare | BAA77358.1 | AB020023 | Nicotiana tabacum |
| CAA72187.1 | Y11352 | Oryza sativa | BAB16432.1 | AB041520 | Nicotiana tabacum |
| CAA72186.1 | Y11351 | Oryza sativa | AAC49528.1 | U56834 | Petroselinum crispum |
| CAA67600.1 | X99210 | Lycopersicon esculentum | AAD27591.1 | AF121354 | Petroselinum crispum |

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|----------------|----------|--------------------------------|----------------|----------|-------------------------------|
| AAC19392.1 | AF069314 | Mesembryanthemum crystallinum | AAD49230.1 | AF159385 | Hordeum bulbosum |
| CAA05081.1 | AJ001903 | Triticum turgidum subsp. durum | AAD49232.1 | AF159387 | Lolium perenne |
| BAB20886.1 | AB053294 | Oryza sativa | AAD49233.1 | AF159388 | Phalaris coerulescens |
| AAC49357.1 | U35830 | Pisum sativum | AAD49234.1 | AF159389 | Phalaris coerulescens |
| CAA45098.1 | X63537 | Pisum sativum | BAA13524.1 | D87984 | Fagopyrum esculentum |
| CAA41415.1 | X58527 | Nicotiana tabacum | CAA41415.1 | X58527 | Nicotiana tabacum |
| BAA04864.1 | D21836 | Oryza sativa | AAD49231.1 | AF159386 | Secale cereale |
| AAB51522.1 | U92541 | Oryza sativa | CAA56850.1 | X80887 | Chlamydomonas reinhardtii |
| BAA05546.1 | D26547 | Oryza sativa | CAA55399.1 | X78822 | Chlamydomonas reinhardtii |
| AAC04671.1 | AF018174 | Brassica napus | AAB53695.1 | U59380 | Brassica napus |
| AAC32111.1 | AF051206 | Picea mariana | AAD56954.1 | AF186240 | Secale cereale |
| CAA94534.1 | Z70677 | Ricinus communis | CAA35827.1 | X51463 | Spinacia oleracea |
| BAA25681.1 | AB010434 | Brassica rapa | CAA35826.1 | X51462 | Spinacia oleracea |
| BAA13524.1 | D87984 | Fagopyrum esculentum | CAA45098.1 | X63537 | Pisum sativum |
| AAG35777.1 | AF273844 | Brassica oleracea var. | CAA33082.1 | X14959 | Spinacia oleracea |
| alboglabra | | | AAC49357.1 | U35830 | Pisum sativum |
| AAB53694.1 | U59379 | Brassica napus | AAC19392.1 | AF069314 | Mesembryanthemum crystallinum |
| CAA77847.1 | Z11803 | Nicotiana tabacum | CAA56851.1 | X80888 | Chlamydomonas reinhardtii |
| CAA56850.1 | X80887 | Chlamydomonas reinhardtii | CAA55398.1 | X78821 | Chlamydomonas reinhardtii |
| CAA55399.1 | X78822 | Chlamydomonas reinhardtii | CAA53900.1 | X76269 | Pisum sativum |
| CAA35827.1 | X51463 | Spinacia oleracea | AAC49358.1 | U35831 | Pisum sativum |
| CAA35826.1 | X51462 | Spinacia oleracea | AAC04671.1 | AF018174 | Brassica napus |
| AAD33596.1 | AF133127 | Hevea brasiliensis | CAA06736.1 | AJ005841 | Oryza sativa |
| AAB53695.1 | U59380 | Brassica napus | AAB52409.1 | U76831 | Brassica napus |
| | | | AAD45358.1 | AF160870 | Brassica napus |
| SEQ ID NO. 147 | | | SEQ ID NO. 148 | | |
| AAD33596.1 | AF133127 | Hevea brasiliensis | AAC49358.1 | U35831 | Pisum sativum |
| CAA77847.1 | Z11803 | Nicotiana tabacum | CAA53900.1 | X76269 | Pisum sativum |
| BAB20886.1 | AB053294 | Oryza sativa | AAB52409.1 | U76831 | Brassica napus |
| AAF88067.1 | AF286593 | Triticum aestivum | AAD45358.1 | AF160870 | Brassica napus |
| CAA05081.1 | AJ001903 | Triticum turgidum subsp. durum | | | |
| CAA94534.1 | Z70677 | Ricinus communis | SEQ ID NO. 149 | | |
| AAC32111.1 | AF051206 | Picea mariana | CAB88032.1 | AJ271093 | Lycopersicon esculentum |
| BAA25681.1 | AB010434 | Brassica rapa | AAF67141.1 | AF230371 | Lycopersicon esculentum |
| AAG35777.1 | AF273844 | Brassica oleracea var. | AAA03353.1 | U00428 | Linum usitatissimum |
| alboglabra | | | CAB86383.1 | AJ250864 | Hordeum vulgare |
| AAB53694.1 | U59379 | Brassica napus | CAB86384.1 | AJ251304 | Hordeum vulgare |
| BAB39913.1 | AF002912 | Oryza sativa | AAF64041.1 | AF229811 | Cucumis sativus |
| BAA05546.1 | D26547 | Oryza sativa | CAB54848.1 | AJ249246 | Medicago sativa |
| AAB51522.1 | U92541 | Oryza sativa | CAB54847.1 | AJ249245 | Medicago sativa |
| BAA04864.1 | D21836 | Oryza sativa | | | |

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| CAB54849.1 | AJ249247 | Medicago sativa | AAG01533.1 | AF289466 | Nicotiana tabacum |
| AAA97465.1 | U51674 | Capsicum annuum | CAA65980.1 | X97315 | Medicago sativa |
| AAK27266.1 | AY028374 | Capsicum annuum | CAC15503.1 | AJ297916 | Lycopersicon esculentum |
| AAK15070.1 | AF239670 | Esidium guajava | CAA66235.1 | X97639 | Antirrhinum majus |
| AAK27265.1 | AY028373 | Lycopersicon esculentum | CAC17703.1 | AJ278885 | Chenopodium rubrum |
| AAF67142.1 | AF230372 | Lycopersicon esculentum | AAD08721.1 | AF038570 | Dunaliella tertiolecta |
| CAB43022.1 | AJ239065 | Lycopersicon esculentum | CAA65982.1 | X97317 | Medicago sativa |
| SEQ ID NO. 150 | | | CAC15504.1 | AJ297917 | Lycopersicon esculentum |
| AAA74900.1 | L34343 | Ruta graveolens | CAA66236.1 | X97640 | Antirrhinum majus |
| AAA74901.1 | L34344 | Ruta graveolens | BAA19553.1 | D64036 | Oryza sativa |
| AAC27795.1 | AF079168 | Nicotiana tabacum | AAA33479.1 | M60526 | Zea mays |
| BAA82095.1 | AB022603 | Oryza sativa | CAA42922.1 | X60374 | Oryza sativa |
| BAA82094.1 | AB022602 | Oryza sativa | CAA54746.1 | X77680 | Picea abies |
| CAC29060.1 | AJ250008 | Catharanthus roseus | AAD10483.1 | U23409 | Triticum aestivum |
| SEQ ID NO. 151 | | | AAA92823.1 | U18365 | Brassica napus |
| AAA92823.1 | U18365 | Brassica napus | CAA71242.1 | Y10160 | Chenopodium rubrum |
| AAK16652.1 | AF194820 | Populus tremula x Populus tremuloides | CAA76700.1 | Y17225 | Lycopersicon esculentum |
| CAA76700.1 | Y17225 | Lycopersicon esculentum | CAA56815.2 | X80845 | Pinus contorta |
| AAC41680.1 | L34206 | Petroselinum crispum | AAK16652.1 | AF194820 | Populus tremula x Populus tremuloides |
| CAA76701.1 | Y17226 | Lycopersicon esculentum | AG01534.1 | AF289467 | Nicotiana tabacum |
| AAA34241.1 | M99497 | Vigna aconitifolia | CAA66233.1 | X97637 | Antirrhinum majus |
| CAA99991.1 | Z75661 | Sesbania rostrata | CAA76701.1 | Y17226 | Lycopersicon esculentum |
| CAA61581.1 | X89400 | Vigna unguiculata | AAA34241.1 | M99497 | Vigna aconitifolia |
| AAK33479.1 | M60526 | Zea mays | CAA61581.1 | X89400 | Vigna unguiculata |
| AAD30506.1 | AF129886 | Vigna radiata | CAA42923.1 | X60375 | Oryza sativa |
| AAD30494.1 | AF126737 | Phaseolus vulgaris | BAA33152.1 | AB008187 | Pisum sativum |
| CAC15503.1 | AJ297916 | Lycopersicon esculentum | AAB02567.1 | L77082 | Nicotiana tabacum |
| AAD08721.1 | AF038570 | Dunaliella tertiolecta | CAA99991.1 | Z75661 | Sesbania rostrata |
| CAC15504.1 | AJ297917 | Lycopersicon esculentum | AAC41680.1 | L34206 | Petroselinum crispum |
| BAA19553.1 | D64036 | Oryza sativa | CAA50038.1 | X70707 | Medicago sativa |
| CAA37207.1 | X53035 | Pisum sativum | BAA21673.1 | AB006033 | Allium cepa |
| CAA41172.1 | X58194 | Oryza sativa | CAA73997.1 | Y13646 | Petunia x hybrida |
| AAA98856.1 | U53510 | Solanum tuberosum | AAB02568.1 | L77083 | Nicotiana tabacum |
| BAB18271.1 | AB035141 | Chlamydomonas reinhardtii | AAD10484.1 | U23410 | Triticum aestivum |
| CAA96384.1 | Z71702 | Beta vulgaris | AAB41817.1 | M58365 | Medicago sativa |
| SEQ ID NO. 152 | | | AAD30506.1 | AF129886 | Vigna radiata |
| AAG01532.1 | AF289465 | Nicotiana tabacum | AAD30494.1 | AF126737 | Phaseolus vulgaris |
| | | | CAA66234.1 | X97638 | Antirrhinum majus |
| | | | CAA41172.1 | X58194 | Oryza sativa |
| | | | BAA28778.1 | AB015182 | Mesembryanthemum crystallinum |

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| CAA65979.1 | X97314 | Medicago sativa | AAD00708.1 | U91857 | Stylosanthes hamata |
| CAA65981.1 | X97316 | Medicago sativa | AAC49741.1 | U89257 | Lycopersicon esculentum |
| AAG40580.1 | AF216316 | Oryza sativa | AAC29516.1 | U77655 | Solanum tuberosum |
| CAB61889.1 | AJ251330 | Oryza sativa | AAF05606.1 | AF190770 | Oryza sativa |
| BAB18271.1 | AB035141 | Chlamydomonas reinhardtii | BAA76734.1 | AB024575 | Nicotiana tabacum |
| SEQ ID NO. 154 | | | | | |
| AAC50047.1 | U89255 | Lycopersicon esculentum | AAD45623.1 | AF084185 | Brassica napus |
| BAA97122.1 | AB016264 | Nicotiana sylvestris | AAG59619.1 | AF243384 | Oryza sativa |
| BAA07321.1 | D38123 | Nicotiana tabacum | SEQ ID NO. 156 | | |
| AAC62619.1 | AF057373 | Nicotiana tabacum | CAA58775.1 | X83923 | Solanum tuberosum |
| BAA87068.1 | AB035270 | Matricaria chamomilla | CAB404994.1 | AJ001772 | Nicotiana tabacum |
| CAB96899.1 | AJ251249 | Catharanthus roseus | CAB52708.1 | AJ010712 | Solanum tuberosum |
| CAB96900.1 | AJ251250 | Catharanthus roseus | CAA67782.1 | X99405 | Nicotiana tabacum |
| AAB38748.1 | U81157 | Nicotiana tabacum | CAA03941.1 | AJ000184 | Spinacia oleracea |
| AAC49740.1 | U89256 | Lycopersicon esculentum | AAB69317.1 | AF012861 | Petroselinum crispum |
| BAA97124.1 | AB016266 | Nicotiana sylvestris | CAB52685.1 | AJ132346 | Dunaliella bioculata |
| BAA97123.1 | AB016265 | Nicotiana sylvestris | CAA03939.1 | AJ000182 | Spinacia oleracea |
| AAD00708.1 | U91857 | Stylosanthes hamata | AAF87216.1 | AF231351 | Nicotiana tabacum |
| BAB03248.1 | AB037183 | Oryza sativa | CAA03940.1 | AJ000183 | Spinacia oleracea |
| AAF05606.1 | AF190770 | Oryza sativa | AAB41552.1 | U18238 | Medicago sativa subsp. sativa |
| BAA76734.1 | AB024575 | Nicotiana tabacum | BAA97662.1 | AB029454 | Triticum aestivum |
| AAC49741.1 | U89257 | Lycopersicon esculentum | AAD11426.1 | AF097663 | Mesembryanthemum crystallinum |
| AAC29516.1 | U77655 | Solanum tuberosum | CAA52442.1 | X74421 | Solanum tuberosum |
| AAD45623.1 | AF084185 | Brassica napus | AAB69318.1 | AF012862 | Petroselinum crispum |
| AAG59618.1 | AF239616 | Hordeum vulgare | BAA97663.1 | AB029455 | Triticum aestivum |
| AAK01089.1 | AF298231 | Hordeum vulgare | AAB69319.1 | AF012863 | Petroselinum crispum |
| SEQ ID NO. 155 | | | | | |
| BAA97124.1 | AB016266 | Nicotiana sylvestris | BAA97664.1 | AB029456 | Triticum aestivum |
| BAA87068.1 | AB035270 | Matricaria chamomilla | CAA04993.1 | AJ001770 | Nicotiana tabacum |
| AAC50047.1 | U89255 | Lycopersicon esculentum | CAA04992.1 | AJ001769 | Nicotiana tabacum |
| BAA97122.1 | AB016264 | Nicotiana sylvestris | AAG23802.1 | AF260736 | Cucurbita pepo |
| BAA07321.1 | D38123 | Nicotiana tabacum | CAB66330.1 | AJ279688 | Betula pendula |
| AAC49740.1 | U89256 | Lycopersicon esculentum | BAA82155.1 | AB011441 | Triticum aestivum |
| AAC62619.1 | AF057373 | Nicotiana tabacum | CAA06200.1 | AJ004900 | Glycine max |
| AAB38748.1 | U81157 | Nicotiana tabacum | SEQ ID NO. 157 | | |
| CAB96900.1 | AJ251250 | Catharanthus roseus | CAA70768.1 | Y09579 | Pisum sativum |
| CAB96899.1 | AJ251249 | Catharanthus roseus | CAB94801.1 | AJ289774 | Pisum sativum |
| BAA97123.1 | AB016265 | Nicotiana sylvestris | CAB89693.1 | AJ276591 | Pisum sativum |
| BAB03248.1 | AB037183 | Oryza sativa | AAC98912.1 | AF029984 | Lycopersicon esculentum |
| | | | CAB89694.1 | AJ276592 | Pisum sativum |
| | | | CAB94800.1 | AJ289773 | Pisum sativum |

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|----------------|----------|------------------------------|----------------|--------------------------------|
| BAA94422.1 | AB040053 | Oryza sativa subsp. japonica | AC084763 | Oryza sativa |
| AAG31173.1 | AF315714 | Ipomoea nil | AB002109 | Oryza sativa |
| SEQ ID NO. 159 | | | U73939 | Nicotiana tabacum |
| AAC39355.1 | AF007807 | Daucus carota | I38855 | Glycine max |
| CAA05207.1 | AJ002140 | Lycopersicon esculentum | D88399 | Oryza sativa |
| BAA92852.1 | AB030726 | Nicotiana tabacum | Z26846 | Mesembryanthemum crystalli |
| AAC49931.1 | AF034419 | Pisum sativum | AJ005373 | Craterostigma plantagineum |
| AAC15406.1 | AF229183 | Zea mays | AF186020 | Vicia faba |
| AAC39356.1 | AF007808 | Daucus carota | U29095 | Triticum aestivum |
| AAK11516.1 | AF243043 | Zea mays | AF100162 | Chlamydomonas reinhardtii |
| SEQ ID NO. 161 | | | M94726 | Triticum aestivum |
| CAB89693.1 | AJ276591 | Pisum sativum | SEQ ID NO. 163 | |
| CAB94801.1 | AJ289774 | Pisum sativum | CAA94534.1 | Ricinus communis |
| CAB94800.1 | AJ289773 | Pisum sativum | CAA77847.1 | Nicotiana tabacum |
| CAB89694.1 | AJ276592 | Pisum sativum | CAA41415.1 | Nicotiana tabacum |
| SEQ ID NO. 162 | | | BAA05546.1 | Oryza sativa |
| AAD23582.1 | AF128443 | Glycine max | AAB51522.1 | Oryza sativa |
| CAA65244.1 | X95997 | Solanum tuberosum | BAA04864.1 | Oryza sativa |
| CAA46556.1 | X65606 | Hordeum vulgare | BAB20886.1 | Oryza sativa |
| AAF66639.1 | AF143743 | Lycopersicon esculentum | BAA13524.1 | Fagopyrum esculentum |
| BAA05649.1 | D26602 | Nicotiana tabacum | AAB53695.1 | Brassica napus |
| AAB52224.1 | U83797 | Solanum tuberosum | AAC32111.1 | Picea mariana |
| AAC99329.1 | AF062479 | Oryza sativa | AAF88067.1 | Triticum aestivum |
| CAA07813.1 | AJ007990 | Hordeum vulgare | CAA05081.1 | Triticum turgidum subsp. durum |
| CAA46554.1 | X65604 | Hordeum vulgare | AAB53694.1 | Brassica napus |
| AAB05457.1 | U55768 | Oryza sativa | AAG35777.1 | Brassica oleracea var. |
| CAA57898.1 | X82548 | Hordeum vulgare | AB010434 | Brassica rapa |
| CAA71142.1 | Y10036 | Cucumis sativus | AAD49232.1 | Lolium perenne |
| CAA65243.1 | X95996 | Solanum tuberosum | AAD49231.1 | Secale cereale |
| BAA96628.1 | AP002482 | Oryza sativa | AAD49234.1 | Phalaris coerulescens |
| CAA73068.1 | Y12465 | Sorghum bicolor | AAD49233.1 | Phalaris coerulescens |
| CAA73067.1 | Y12464 | Sorghum bicolor | AAD49230.1 | Hordeum bulbosum |
| BAA83689.1 | AB011968 | Oryza sativa | AAD56954.1 | Secale cereale |
| AAF22219.1 | AF141378 | Zea mays | BAB39913.1 | Oryza sativa |
| BAA83688.1 | AB011967 | Oryza sativa | CAA55399.1 | Chlamydomonas reinhardtii |
| BAA34675.1 | AB011670 | Triticum aestivum | CAA56850.1 | Chlamydomonas reinhardtii |
| AAB62693.1 | AF004947 | Oryza sativa | AAD33596.1 | Hevea brasiliensis |
| AAD00239.1 | U73938 | Nicotiana tabacum | AAC19392.1 | Mesembryanthemum crystallinum |
| | | | CAA45098.1 | Pisum sativum |

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|----------------|----------|--------------------------------|----------------|----------|-------------------------------|
| AAC49357.1 | U35830 | Pisum sativum | AAD56954.1 | AF186240 | Secale cereale |
| CAA35827.1 | X51463 | Spinacia oleracea | AAD33596.1 | AF133127 | Hevea brasiliensis |
| CAA35826.1 | X51462 | Spinacia oleracea | AAC49358.1 | U35831 | Pisum sativum |
| CAA53900.1 | X76269 | Pisum sativum | CAA53900.1 | X76269 | Pisum sativum |
| CAA55398.1 | X78821 | Chlamydomonas reinhardtii | CAA35826.1 | X51462 | Spinacia oleracea |
| CAA56851.1 | X80888 | Chlamydomonas reinhardtii | CAA35827.1 | X51463 | Spinacia oleracea |
| CAA44209.1 | X62335 | Chlamydomonas reinhardtii | CAA45098.1 | X63537 | Pisum sativum |
| AAC49358.1 | U35831 | Pisum sativum | AAC49357.1 | U35830 | Pisum sativum |
| AAC04671.1 | AF018174 | Brassica napus | AAD45358.1 | AF160870 | Brassica napus |
| CAA33082.1 | X14959 | Spinacia oleracea | AAB52409.1 | U76831 | Brassica napus |
| CAA06736.1 | AJ005841 | Oryza sativa | AAC19392.1 | AF069314 | Mesembryanthemum crystallinum |
| AAD45358.1 | AF160870 | Brassica napus | CAA06736.1 | AJ005841 | Oryza sativa |
| AAB52409.1 | U76831 | Brassica napus | AAC04671.1 | AF018174 | Brassica napus |
| CAA06735.1 | AJ005840 | Triticum aestivum | CAA56851.1 | X80888 | Chlamydomonas reinhardtii |
| AAB47556.1 | U87141 | Mesembryanthemum crystallinum | CAA44209.1 | X62335 | Chlamydomonas reinhardtii |
| | | | CAA55398.1 | X78821 | Chlamydomonas reinhardtii |
| | | | CAA06735.1 | AJ005840 | Triticum aestivum |
| | | | AAB47556.1 | U87141 | Mesembryanthemum crystallinum |
| | | | CAA33082.1 | X14959 | Spinacia oleracea |
| SEQ ID NO. 164 | | | SEQ ID NO. 165 | | |
| AAB53695.1 | U59380 | Brassica napus | AAF78756.1 | AF271358 | Oryza sativa |
| BAA04864.1 | D21836 | Oryza sativa | | | |
| BAA05546.1 | D26547 | Oryza sativa | SEQ ID NO. 166 | | |
| AAB51522.1 | U92541 | Oryza sativa | AAG14456.1 | AF283708 | Tulipa gesneriana |
| BAA25681.1 | AB010434 | Brassica rapa | AAG14455.1 | AF283707 | Tulipa gesneriana |
| AAB53694.1 | U59379 | Brassica napus | AAG14454.1 | AF283706 | Tulipa gesneriana |
| AAG35777.1 | AF273844 | Brassica oleracea var. | | | |
| alboglabra | | | SEQ ID NO. 167 | | |
| CAA94534.1 | Z70677 | Ricinus communis | AAC49832.1 | AF005492 | Oryza sativa |
| CAA41415.1 | X58527 | Nicotiana tabacum | BAA97100.1 | AB040471 | Nicotiana tabacum |
| CAA77847.1 | Z11803 | Nicotiana tabacum | AAC04862.1 | AF046934 | Paulownia kawakamii |
| BAB20886.1 | AB053294 | Oryza sativa | CAA05898.1 | AJ003142 | Lycopersicon esculentum |
| AAF88067.1 | AF286593 | Triticum aestivum | CAA52015.1 | X73635 | Lycopersicon esculentum |
| BAA13524.1 | D87984 | Fagopyrum esculentum | BAA96162.1 | AP002092 | Oryza sativa |
| CAA05081.1 | AJ001903 | Triticum turgidum subsp. durum | BAA07289.1 | D38111 | Triticum aestivum |
| AAC32111.1 | AF051206 | Picea mariana | CAA40101.1 | X56781 | Triticum aestivum |
| CAA55399.1 | X78822 | Chlamydomonas reinhardtii | CAA71687.1 | Y10685 | Glycine max |
| CAA56850.1 | X80887 | Chlamydomonas reinhardtii | AAB36514.1 | U57389 | Phaseolus vulgaris |
| AAD49231.1 | AF159386 | Secale cereale | CAA41453.1 | X58577 | Petroselinum crispum |
| AAD49232.1 | AF159387 | Lolium perenne | CAC00656.1 | AJ292743 | Petroselinum crispum |
| AAD49233.1 | AF159388 | Phalaris coerulescens | | | |
| AAD49230.1 | AF159385 | Hordeum bulbosum | | | |
| AAD49234.1 | AF159389 | Phalaris coerulescens | | | |
| BAB39913.1 | AP002912 | Oryza sativa | | | |

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|----------------|-------------|-------------------------------|----------------|----------|----------------------------|
| U42208 | AAAB40291.1 | Oryza sativa | AAB66608.1 | AF012889 | Zea mays |
| AAAK14790.1 | AY027510 | Catharanthus roseus | AAB88537.1 | AF035944 | Fragaria x ananassa |
| CAA71768.1 | Y10809 | Petroselinum crispum | BAA33152.1 | AB008187 | Pisum sativum |
| AAC37418.1 | L34551 | Oryza sativa | AAF22219.1 | AF141378 | Zea mays |
| CAA66478.1 | X97904 | Vicia faba | CAA81443.1 | Z26846 | Mesembryanthemum crystalli |
| AAC49556.1 | U04295 | Oryza sativa | AAC25423.1 | AF072908 | Nicotiana tabacum |
| CAA88493.1 | Z48603 | Nicotiana tabacum | AAG46110.1 | AC073166 | Oryza sativa |
| AAK25822.1 | AF350505 | Phaseolus vulgaris | AA96325.1 | M94726 | Triticum aestivum |
| CAA70216.1 | Y09013 | Triticum aestivum | AAK30005.1 | AY029067 | Rosa hybrid cultivar |
| CAA71795.1 | Y10834 | Hordeum vulgare | AA858348.1 | U29095 | Triticum aestivum |
| SEQ ID NO. 169 | | | | | |
| CAA06925.1 | AJ006228 | Nicotiana tabacum | SEQ ID NO. 171 | | |
| SEQ ID NO. 170 | | | | | |
| BAA83689.1 | AB011968 | Oryza sativa | CAC00658.1 | AJ292745 | Petroselinum crispum |
| CAA06334.1 | AJ005077 | Lycopersicon esculentum | CAC00657.1 | AJ292744 | Petroselinum crispum |
| AAF05112.1 | AF158091 | Mesembryanthemum crystallinum | CAA74023.1 | Y13676 | Antirrhinum majus |
| CAA89202.1 | Z49233 | Chlamydomonas eugametos | CAA74022.1 | Y13675 | Antirrhinum majus |
| AAE21062.1 | AF216527 | Dunaliella tertiolecta | BAA22204.1 | D63951 | Nicotiana tabacum |
| AAE19402.1 | AF203480 | Lycopersicon esculentum | AAD55394.1 | AF176641 | Lycopersicon esculentum |
| CAA73068.1 | Y12465 | Sorghum bicolor | AAK25822.1 | AF350505 | Phaseolus vulgaris |
| AAE19403.1 | AF203481 | Lycopersicon esculentum | AAK01953.1 | AY026054 | Phaseolus acutifolius |
| AAG31141.1 | AF305911 | Oryza sativa | CAA71687.1 | Y10685 | Glycine max |
| AAG31142.1 | AF305912 | Hordeum vulgare | AAC37418.1 | I34551 | Oryza sativa |
| AAF06970.1 | AF162662 | Kalanchoe fedtschenkoi | BAA36492.1 | AB021736 | Oryza sativa |
| AAF06969.1 | AF162661 | Kalanchoe fedtschenkoi | BAA11431.1 | D78609 | Oryza sativa |
| AAE19401.1 | AF203479 | Glycine max | CAA41453.1 | X58577 | Petroselinum crispum |
| BAA90814.1 | AP001168 | Oryza sativa | CAA71768.1 | Y10809 | Petroselinum crispum |
| CAA73067.1 | Y12464 | Sorghum bicolor | AAC49556.1 | U04295 | Oryza sativa |
| BAA34675.1 | AB011670 | Triticum aestivum | BAA07289.1 | D38111 | Triticum aestivum |
| AA805457.1 | U55768 | Oryza sativa | CAA71795.1 | Y10834 | Hordeum vulgare |
| BAA83688.1 | AB011967 | Oryza sativa | CAA70216.1 | Y09013 | Triticum aestivum |
| CAA39936.1 | X56599 | Oryza sativa | CAA40101.1 | X56781 | Triticum aestivum |
| CAA41172.1 | X58194 | Daucus carota | CAA11499.1 | AJ223624 | Spinacia oleracea |
| BAA85396.1 | AP000615 | Oryza sativa | AAC49474.1 | U41817 | Phaseolus vulgaris |
| AAC05270.1 | AF048691 | Oryza sativa | AA840291.1 | U42208 | Oryza sativa |
| AAD17800.1 | AF090835 | Mesembryanthemum crystallinum | BAA02304.1 | D12920 | Triticum aestivum |
| CAA50038.1 | X70707 | Medicago sativa | SEQ ID NO. 180 | | |
| CAA57156.1 | X81393 | Oryza sativa | AAD26116.1 | AF106954 | Brassica napus |
| BAA96628.1 | AP002482 | Oryza sativa | CAB51533.1 | AJ237693 | Ajuga reptans |
| | | | CAB51534.1 | AJ237694 | Ajuga reptans |
| | | | AAD55726.1 | AF178569 | Vitis riparia |

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|----------------|------------|--------------------------------|--------------------|----------------|----------|-------------------------------|
| SEQ ID NO. 181 | AAA80173.1 | U11446 | Pennisetum glaucum | AAK15502.1 | AF325720 | Pennisetum ciliare |
| AAA80172.1 | U11445 | Pennisetum glaucum | | CAA57914.1 | X82578 | Parthenium argentatum |
| AAA33504.1 | M26227 | Zea mays | | BAA77025.1 | AB026251 | Lithospermum erythrorhizon |
| AAA80171.1 | U11444 | Pennisetum glaucum | | SEQ ID NO. 188 | | |
| AAG25927.1 | AF260918 | Petunia x hybrida | | BAA04611.1 | D17765 | Oryza sativa |
| AAG25919 | AF260919 | Petunia x hybrida | | SEQ ID NO. 189 | | |
| CAA40544.1 | X57276 | Zea mays | | CAC12883.1 | AJ295006 | Nicotiana tabacum |
| AAA80175.1 | U11450 | Sorghum bicolor | | CAA55090.1 | X78284 | Medicago sativa |
| AAC49216.1 | U39865 | Oryza officinalis | | BAA92964.1 | AP001551 | Oryza sativa |
| AAB03841.1 | U57899 | Zea mays | | AAB82139.1 | AF022736 | Oryza sativa |
| SEQ ID NO. 185 | CAA10134.1 | Cicer arietinum | | CAA64625.1 | X95313 | Chlamydomonas reinhardtii |
| CAJ012693 | AJ012693 | Medicago sativa subsp. x varia | | AAF78516.1 | AF195217 | Pyrus pyrifolia |
| CAB65280.1 | AJ248323 | Spinacia oleracea | | AAF43806.1 | AF166114 | Chloroplast Mesostigma viride |
| AAC32448.1 | U76296 | Lycopersicon esculentum | | BAA58003.1 | AB001684 | Chlorella vulgaris |
| AAF66243.1 | AF243181 | Triticum aestivum | | AAC64970.1 | AF095708 | Oryza sativa |
| AAD10251.1 | AF031195 | Lycopersicon esculentum | | AAD54793.1 | AF137379 | Chloroplast Nephroselmis |
| AAF66242.1 | AF243180 | Pisum sativum | | olivacea | | |
| CAA80963.1 | Z25471 | Zea mays | | SEQ ID NO. 190 | | |
| AAC64163.1 | AF093537 | | | CAB61752.1 | AJ275318 | Cicer arietinum |
| SEQ ID NO. 187 | AAD32207.1 | Prunus armeniaca | | CAC14890.1 | AJ295156 | Phragmites australis |
| AAB70919.1 | AF019376 | Brassica napus | | AAB68605.1 | U82433 | Prunus armeniaca |
| AAB71420.1 | U74631 | Ricinus communis | | AAA86532.1 | U31544 | Pisum sativum |
| AAB71419.1 | U74630 | Ricinus communis | | SEQ ID NO. 191 | | |
| CAA95999.1 | Z71395 | Nicotiana plumbaginifolia | | BAA02157.1 | D12632 | Oryza sativa |
| CAA05161.1 | AJ002057 | Beta vulgaris | | BAB19390.1 | AF002542 | Oryza sativa |
| AAA32949.1 | L27349 | Hordeum vulgare | | AAF64190.1 | AF245665 | Mesembryanthemum crystallinum |
| AAF01470.1 | AF190454 | Zea mays | | SEQ ID NO. 192 | | |
| CAA86728.1 | Z46772 | Zea mays | | CAA12358.1 | AJ225027 | Cicer arietinum |
| CAA61939.1 | X89813 | Zea mays | | CAA63960.1 | X94296 | Hordeum vulgare |
| AAG01147.1 | AF283816 | Pinus taeda | | AAG13986.1 | AF298827 | Prunus avium |
| AAA32948.1 | L27348 | Hordeum vulgare | | SEQ ID NO. 193 | | |
| BAA88900.1 | AB021259 | Oryza sativa | | BAA94964.1 | AB042113 | Glycine max |
| AAD17490.1 | AF052040 | Berberis stolonifera | | BAA94966.1 | AB042115 | Oryza sativa |
| CAA54975.1 | X78057 | Zea mays | | AAF67099.1 | AF216853 | Zea mays |
| CAB54526.1 | AJ000765 | Chlamydomonas reinhardtii | | BAA94965.1 | AB042114 | Glycine max |
| BAA85118.1 | AB018243 | Solanum melongena | | | | |

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| CAA41415.1 | X58527 | Nicotiana tabacum | SEQ ID NO. 227 | Lycopersicon esculentum |
| AAB53695.1 | U59380 | Brassica napus | AAA34140.1 | Nicotiana tabacum |
| BAB20886.1 | AB053294 | Oryza sativa | CAR45523.1 | Lycopersicon esculentum |
| CAA05081.1 | AJ001903 | Triticum turgidum subsp. durum | AAA34186.1 | Hordeum vulgare |
| AAF88067.1 | AF286593 | Triticum aestivum | AAF23819.1 | Oryza sativa |
| BAA05546.1 | D26547 | Oryza sativa | AAC67558.1 | Pinus sylvestris |
| BAA04864.1 | D21836 | Oryza sativa | CAA41404.1 | Asarina barclaiana |
| AAB51522.1 | U92541 | Oryza sativa | AAF44702.1 | Pinus sylvestris |
| BAA25681.1 | AB010434 | Brassica rapa | CAA41405.1 | Chlamydomonas reinhardtii |
| CAA94534.1 | Z70677 | Ricinus communis | AAG28464.1 | Oryza sativa |
| AAB53694.1 | U59379 | Brassica napus | AAC14566.1 | Zea mays |
| AAG35777.1 | AF273844 | Brassica oleracea var. | CAA90681.1 | Hordeum vulgare |
| alboglaba | | | AAF90200.1 | Sinapis alba |
| CAA77847.1 | Z11803 | Nicotiana tabacum | CAA33903.1 | Sinapis alba |
| AAD49231.1 | AF159386 | Secale cereale | CAA34459.1 | Oryza sativa |
| AAD49233.1 | AF159388 | Phalaris coarulescens | AAC67557.1 | Triticum aestivum |
| AAD49234.1 | AF159389 | Phalaris coarulescens | AAB18209.1 | Zea mays |
| BAB39913.1 | AP002912 | Oryza sativa | AAA64414.1 | Hordeum vulgare |
| AAD49230.1 | AF159385 | Hordeum bulbosum | CAA44777.1 | Pinus sylvestris |
| AAD49232.1 | AF159387 | Lolium perenne | CAA41406.1 | Chloroplast Gossypium hirsutum |
| AAD33596.1 | AF133127 | Hevea brasiliensis | AAA18529.1 | Zea mays |
| CAA55399.1 | X78822 | Chlamydomonas reinhardtii | AAA64415.1 | Pinus sylvestris |
| CAA56850.1 | X80887 | Chlamydomonas reinhardtii | CAA32658.1 | Lycopersicon esculentum |
| AAD56954.1 | AF186240 | Secale cereale | CAA32197.1 | Lycopersicon esculentum |
| CAA44209.1 | X62335 | Chlamydomonas reinhardtii | AAA34159.1 | Pisum sativum |
| CAA56851.1 | X80888 | Chlamydomonas reinhardtii | AAF13731.1 | Nicotiana tabacum |
| CAA55398.1 | X78821 | Chlamydomonas reinhardtii | CAA57877.1 | Lycopersicon esculentum |
| AAC19392.1 | AF069314 | Mesembryanthemum crystallinum | AAA34142.1 | Nicotiana sylvestris |
| AAC04671.1 | AF018174 | Brassica napus | BAA25392.1 | Nicotiana plumbaginifolia |
| AAC49357.1 | U35830 | Pisum sativum | AAA34056.1 | Pisum sativum |
| CAA45098.1 | X63537 | Pisum sativum | CAA57492.1 | Nicotiana sylvestris |
| CAA35827.1 | X51463 | Spinacia oleracea | BAA25396.1 | Phaseolus vulgaris |
| CAA35826.1 | X51462 | Spinacia oleracea | CAA28639.1 | Vitis vinifera |
| CAA53900.1 | X76269 | Pisum sativum | AAA33711.1 | Vigna unguiculata |
| AAC49358.1 | U35831 | Pisum sativum | AAA34141.1 | |
| CAA33082.1 | X14959 | Spinacia oleracea | | |
| AAD45358.1 | AF160870 | Brassica napus | SEQ ID NO. 228 | |
| AAB52409.1 | U76831 | Brassica napus | CAA40474.1 | |
| CAA06736.1 | AJ005841 | Oryza sativa | AAB65776.1 | |
| CAA06735.1 | AJ005840 | Triticum aestivum | CAA61281.1 | |
| AAB03681.1 | U43609 | Chlamydomonas reinhardtii | | |

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| AAB65777.1 | U97522 | Vitis vinifera | AAA17409.1 | U02607 | Solanum tuberosum |
| BAA22966.1 | D45182 | Chenopodium amaranticolor | AAA18332.1 | U02605 | Solanum tuberosum |
| BAA22968.1 | D45184 | Chenopodium amaranticolor | CAA45821.1 | X64518 | Nicotiana tabacum |
| BAA22965.1 | D45181 | Chenopodium amaranticolor | SEQ ID NO. 229 | | |
| CAA43708.1 | X61488 | Brassica napus | AAB35812.1 | S80554 | Arabidopsis |
| BAA22967.1 | D45183 | Chenopodium amaranticolor | AAF23570.1 | AF112095 | Arabidopsis halleri |
| CAA53544.1 | X75945 | Beta vulgaris | AAF23568.1 | AF112093 | Arabidopsis griffithiana |
| AAC49435.1 | U52845 | Daucus carota | AAG43351.1 | AF144533 | Arabidopsis korshinskyi |
| AAB08468.1 | U52846 | Daucus carota | AAF23581.1 | AF112106 | Capsella rubella |
| AAB08470.1 | U52848 | Daucus carota | AAF23569.1 | AF112094 | Halimolobos perplexa var. |
| AAB08469.1 | U52847 | Daucus carota | perplexa | | |
| AAA33445.1 | M84165 | Zea mays | AAG43349.1 | AF144531 | Arabidopsis himalaica |
| AAA33444.1 | M84164 | Zea mays | AAF23575.1 | AF112100 | Arabidopsis lyrata subsp. |
| AAA32916.1 | L25826 | Beta vulgaris | lyrata | | |
| AAD28733.1 | AF112966 | Triticum aestivum | AAF23567.1 | AF112092 | Arabidopsis griffithiana |
| BAB21377.1 | AB054811 | Oryza sativa | AAF23578.1 | AF112103 | Arabidopsis lyrata subsp. |
| BAB21374.1 | AB054687 | Oryza sativa | petraea | | |
| BAA19793.1 | AB003194 | Oryza sativa | AAF23576.1 | AF112101 | Arabis parishii |
| AAA85364.1 | L42467 | Picea glauca | AAF23574.1 | AF112099 | Arabis lyallii |
| AAB01665.1 | U21848 | Brassica napus | AAF23566.1 | AF112091 | Arabis giabra |
| AAC35981.1 | AF090336 | Citrus sinensis | AAF23565.1 | AF112090 | Arabis fendleri |
| AAD28730.1 | AF112963 | Triticum aestivum | AAF23563.1 | AF112088 | Arabis drummondii |
| AAF04454.1 | AF000966 | Poa pratensis | AAF23564.1 | AF112089 | Arabis drummondii |
| CAC17793.1 | AJ301671 | Nicotiana sylvestris | AAF23579.1 | AF112104 | Arabidopsis lyrata subsp. |
| AAF04453.1 | AF000964 | Poa pratensis | petraea | | |
| CAA34812.1 | X16938 | Nicotiana tabacum | AAF23573.1 | AF112098 | Arabis lignifera |
| CAA34813.1 | X16939 | Nicotiana tabacum | AAF23560.1 | AF112085 | Cardamine amara |
| CAA45822.1 | X64519 | Nicotiana tabacum | AAG43348.1 | AF144530 | Rorippa amphibia |
| CAA35945.1 | X51599 | Nicotiana tabacum | AAG43356.1 | AF144538 | Cardamine penzesii |
| AAB23374.1 | S44869 | Nicotiana tabacum | AAG43359.1 | AF144541 | Sisymbrium irio |
| AAA34070.1 | M15173 | Nicotiana tabacum | AAG43352.1 | AF144534 | Lepidium campestre |
| CAA30142.1 | X07130 | Solanum tuberosum | CAA32495.1 | X14314 | Sinapis alba |
| CAA33517.1 | X15494 | Solanum tuberosum | AAG43357.1 | AF144539 | Cardamine rivularis |
| AAG53609.1 | AF280437 | Secale cereale | AAF23583.1 | AF112108 | Barbarea vulgaris |
| CAB01591.1 | Z78202 | Persea americana | AAC31914.1 | AF076336 | Brassica napus |
| CAA53626.1 | X76041 | Triticum aestivum | AAC31912.1 | AF076334 | Brassica napus |
| CAA78845.1 | Z15140 | Lycopersicon esculentum | AAF23577.1 | AF112102 | Arabis pauciflora |
| AAC16010.1 | AF061805 | Elaeagnus umbellata | AAG43350.1 | AF144532 | Cochlearia danica |
| AAA32640.1 | M94106 | Allium sativum | CAA34460.1 | X16437 | Sinapis alba |
| AAA32641.1 | M94105 | Allium sativum | CAA35600.1 | X17577 | Matthiola incana |
| AAA56787.1 | L34211 | Hordeum vulgare | | | |

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| AAG43358.1 | AF144540 | Cardamine pratensis | CAA79625.1 | Z19573 | Medicago sativa |
| AAG43353.1 | AF144535 | Thlaspi arvense | AAF43140.1 | AF217957 | Populus tremuloides |
| AAC31913.1 | AF076335 | Brassica napus | AAC35845.1 | AF083332 | Medicago sativa |
| AAF23571.1 | AF112096 | Arabis hirsuta | CAC07423.1 | AJ295837 | Populus balsamifera subsp. |
| AAF23582.1 | AF112107 | Arabis turrita | trichocarpa | | |
| AAG43406.1 | AF174529 | Aubrieta deltoidea | CAA79622.1 | Z19568 | Populus deltoides |
| AAG43355.1 | AF144537 | Alliaria petiolata | AAC07987.1 | AF038561 | Eucalyptus globulus |
| AAF23580.1 | AF112105 | Arabis procurrens | AAG15553.1 | AF294793 | Eucalyptus saligna |
| AAF23572.1 | AF112097 | Arabis jacquinii | AAK00679.1 | AF229407 | Brassica napus |
| AAF23562.1 | AF112087 | Arabis blepharophylla | CAA46585.1 | X65631 | Eucalyptus gunnii |
| AAF23584.1 | AF112109 | Aubrieta deltoidea | CAA53211.1 | X75480 | Eucalyptus gunnii |
| AAG43354.1 | AF144536 | Microthlaspi perfoliatum | AAK00681.1 | AF229409 | Brassica napus |
| AAF23557.1 | AF112082 | Aethionema grandiflora | AAB70908.1 | AF010290 | Iolium perenne |
| AAF23558.1 | AF112083 | Arabis alpina | AAK00682.1 | AF229410 | Brassica oleracea |
| AAF23559.1 | AF112084 | Arabis alpina | CAA74070.1 | Y13733 | Zea mays |
| AAB87072.1 | AF031922 | Raphanus sativus | CAA06687.1 | AJ005702 | Zea mays |
| AAG43360.1 | AF144542 | Ionopsisidium abulense | AAK00678.1 | AF229406 | Brassica napus |
| AAC31911.1 | AF076333 | Brassica napus | CAA13177.1 | AJ231135 | Saccharum officinarum |
| SEQ ID NO. 231 | | | AAK00684.1 | AF229412 | Brassica rapa |
| AAD10327.1 | U63534 | Fragaria x ananassa | AAK00680.1 | AF229408 | Brassica napus |
| AAK28509.1 | AF320110 | Fragaria x ananassa | AAK00683.1 | AF229411 | Brassica rapa |
| AAB38503.1 | U79770 | Mesembryanthemum crystallinum | BAA19487.1 | D86590 | Zinnia elegans |
| CAA48028.1 | X67817 | Petroselinum crispum | BAA04046.1 | D16624 | Eucalyptus botryoides |
| AAC15467.1 | U24561 | Apium graveolens | AAD18000.1 | AF109157 | Eucalyptus globulus |
| AAC35846.1 | AF083333 | Medicago sativa | AAF23409.1 | AF207552 | Brassica napus |
| AAC61854.1 | AF067082 | Apium graveolens | AAF23412.1 | AF207555 | Brassica rapa |
| AAA74882.1 | L36823 | Stylosanthes humilis | AAF23411.1 | AF207554 | Brassica oleracea |
| AAA74883.1 | L36456 | Stylosanthes humilis | AAF23410.1 | AF207553 | Brassica napus |
| AAF72100.1 | AF146691 | Lycopersicon esculentum | AAF23416.1 | AF207559 | Brassica rapa |
| CAA86072.1 | Z37991 | Pinus taeda | AAF23415.1 | AF207558 | Brassica oleracea |
| CAA05095.1 | AJ001924 | Picea abies | SEQ ID NO. 232 | | |
| AAB38774.1 | U62394 | Pinus radiata | CAA72793.1 | Y12072 | Gossypium arboreum |
| CAA51226.1 | X72675 | Picea abies | AAA87729.1 | U20771 | Lupinus albus |
| CAA05097.1 | AJ001926 | Picea abies | AAA86687.1 | U15777 | Lupinus albus |
| CAA05096.1 | AJ001925 | Picea abies | BAB40666.1 | AB053487 | Humulus lupulus |
| AAC31166.1 | AF060491 | Pinus radiata | BAB40665.1 | AB053486 | Humulus lupulus |
| CAA86073.1 | Z37992 | Pinus taeda | AAC73051.1 | AF048747 | Lycopersicon esculentum |
| CAA44216.1 | X62343 | Nicotiana tabacum | CAA59170.1 | X84695 | Capsicum annuum |
| CAA44217.1 | X62344 | Nicotiana tabacum | CAA57892.1 | X82542 | Parthenium argentatum |
| BAA03099.1 | D13991 | Aralia cordata | AAC78557.1 | AF019892 | Helianthus annuus |

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| CAA57893.1 | X82543 | Parthenium argentatum | CAA87075.1 | Z46951 | Glycine max |
| AAC49452.1 | U36376 | Artemisia annua | CAA87076.1 | Z46952 | Glycine max |
| AAD17204.1 | AF112881 | Artemisia annua | CAA47870.1 | X67601 | Lycopersicon peruvianum |
| BAA19856.1 | D85317 | Oryza sativa | AAF47563.1 | AF208544 | Lycopersicon peruvianum |
| BAA36276.1 | AB021747 | Oryza sativa | AAF37579.1 | AF235958 | Medicago sativa |
| AAD32648.1 | AF136602 | Artemisia annua | CAA87079.1 | Z46955 | Glycine max |
| BAA36347.1 | AB021979 | Oryza sativa | CAA09301.1 | AJ010644 | Pisum sativum |
| AAD37789.1 | AF149257 | Artemisia annua | CAA09300.1 | AJ010643 | Pisum sativum |
| AAD45122.1 | AF164026 | Xanthoceras sorbifolium | | | |
| AAB93951.1 | U97330 | Nicotiana tabacum | SEQ ID NO. 236 | | |
| AAB93984.1 | AF005201 | Parthenium argentatum | AAB72109.1 | AF022217 | Brassica rapa |
| | | | AAD49336.1 | AF166277 | Nicotiana tabacum |
| SEQ ID NO. 233 | | | CAA37847.1 | X53851 | Daucus carota |
| CAB59893.1 | AJ238697 | Hordeum vulgare | CAA08908.1 | AJ009880 | Castanea sativa |
| BAA22194.1 | D63425 | Spinacia oleracea | CAB36910.1 | AJ000691 | Quercus suber |
| CAB59895.1 | AJ238745 | Hordeum vulgare | CAA41547.1 | X58711 | Medicago sativa |
| CAB96145.1 | AJ250951 | Mesembryanthemum crystallinum | AAC39360.1 | U63631 | Fragaria x ananassa |
| CAA42780.1 | X60219 | Nicotiana sylvestris | AAB03893.1 | M11318 | Glycine max |
| BAB16430.1 | AB041518 | Nicotiana tabacum | AAA33975.1 | M11395 | Glycine max |
| AAB94892.1 | AF037051 | Gossypium hirsutum | CAA25578.1 | X01104 | Glycine max |
| CAA75054.1 | Y14762 | Lycopersicon esculentum | CAA37848.1 | X53852 | Daucus carota |
| CAA78466.1 | AF053311 | Zantedeschia aethiopica | BAA33062.1 | AB017273 | Cuscuta japonica |
| AAC75009.1 | Y14707 | Helianthus annuus | CAB55634.2 | AJ237596 | Helianthus annuus |
| CAA74775.1 | Y14429 | Helianthus annuus | AAA61632.1 | U08601 | Papaver somniferum |
| CAA04142.1 | AJ000508 | Pisum sativum | AAA33672.1 | M33899 | Pisum sativum |
| CAB59894.1 | AJ238744 | Hordeum vulgare | AAB63311.1 | U46545 | Helianthus annuus |
| CAA75055.1 | Y14763 | Lycopersicon esculentum | CAB08441.1 | Z95153 | Helianthus annuus |
| BAA83594.1 | AB009083 | Chlamydomonas sp. W80 | CAA42222.1 | X59701 | Helianthus annuus |
| AAB66330.1 | AF014927 | Chlamydomonas reinhardtii | AAB63310.1 | U46544 | Helianthus annuus |
| CAA09194.1 | AJ010455 | Triticum aestivum | AAD30454.1 | AF123257 | Lycopersicon esculentum |
| CAB66331.1 | AJ279689 | Betula pendula | AAD30452.1 | AF123255 | Lycopersicon esculentum |
| | | | AAC78392.1 | U83669 | Oryza sativa |
| SEQ ID NO. 234 | | | CAA39603.1 | X56138 | Lycopersicon esculentum |
| BAA83710.1 | AB014483 | Nicotiana tabacum | BAA02160.1 | D12635 | Oryza sativa |
| CAA39034.1 | X55347 | Lycopersicon peruvianum | AAA33974.1 | M11317 | Glycine max |
| CAA87077.1 | Z46953 | Glycine max | CAA63903.1 | X94193 | Pennisetum glaucum |
| CAA87080.1 | Z46956 | Glycine max | AAD30453.1 | AF123256 | Lycopersicon esculentum |
| CAA47869.1 | X67600 | Lycopersicon peruvianum | AAC78394.1 | U83671 | Oryza sativa |
| CAA47868.1 | X67599 | Lycopersicon esculentum | AAA33910.1 | M80939 | Oryza sativa |
| BAA83711.1 | AB014484 | Nicotiana tabacum | AAC78393.1 | U83670 | Oryza sativa |
| CAA58117.1 | X82943 | Zea mays | CAA63570.1 | X92983 | Pseudotsuga menziesii |

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| CAA43210.1 | X60820 | Oryza sativa | CAA63901.1 | X94191 | Pennisetum glaucum |
| AAA33909.1 | M80938 | Oryza sativa | AAA33672.1 | M33899 | Pisum sativum |
| CAA37864.1 | X53870 | Chenopodium rubrum | CAA41547.1 | X58711 | Medicago sativa |
| CAA63571.1 | X92984 | Pseudotsuga menziesii | CAA46641.1 | X65725 | Zea mays |
| CAA63901.1 | X94191 | Pennisetum glaucum | AAB39856.1 | U81385 | Oryza sativa |
| AAA33671.1 | M33900 | Pisum sativum | AAC78394.1 | U83671 | Oryza sativa |
| CAA46641.1 | X65725 | Zea mays | AAC78392.1 | U83669 | Oryza sativa |
| CAA31785.1 | X13431 | Triticum aestivum | CAA39603.1 | X56138 | Lycopersicon esculentum |
| CAA63902.1 | X94192 | Pennisetum glaucum | AAA33910.1 | M80939 | Oryza sativa |
| AAB339856.1 | U81385 | Oryza sativa | AAA33909.1 | M80938 | Oryza sativa |
| | | | CAA43210.1 | X60820 | Oryza sativa |
| | | | AAD30453.1 | AF123256 | Lycopersicon esculentum |
| | | | AAA34294.1 | I14444 | Triticum aestivum |
| | | | AAD30454.1 | AF123257 | Lycopersicon esculentum |
| SEQ ID NO. 237 | | | SEQ ID NO. 238 | | |
| AAC14577.1 | U72396 | Lycopersicon esculentum | AAD30456.1 | AF123259 | Lycopersicon esculentum |
| AAA33670.1 | M33901 | Pisum sativum | AAF31705.1 | AF221856 | Euphorbia esula |
| CAA82653.1 | Z29554 | Helianthus annuus | AAC32131.1 | AF051230 | Picea mariana |
| AAD41409.1 | AF159562 | Prunus dulcis | CAA78738.1 | Z15018 | Oryza sativa |
| CAA65020.1 | X95716 | Petroselinum crispum | | | |
| AAC36312.1 | AF090115 | Lycopersicon esculentum | SEQ ID NO. 239 | | |
| AAB01561.1 | I47717 | Picea glauca | CAB57979.1 | AJ011914 | Lycopersicon esculentum |
| AAB39336.1 | M99430 | Ipomoea nil | | | |
| AAB01562.1 | I47740 | Picea glauca | SEQ ID NO. 240 | | |
| CAA67206.1 | X98617 | Medicago sativa | AAA33945.1 | J03919 | Glycine max |
| CAA41218.1 | X58279 | Triticum aestivum | CAA48297.1 | X68215 | Pisum sativum |
| CAA67726.1 | X99346 | Picea abies | AAA33944.1 | J03920 | Glycine max |
| CAA38012.1 | X54075 | Zea mays | CAA48298.1 | X68216 | Pisum sativum |
| CAA38013.1 | X54076 | Zea mays | CAA48300.1 | X68218 | Pisum sativum |
| AAB26481.1 | S59777 | Zea mays | CAA48299.1 | X68217 | Pisum sativum |
| AAB39335.1 | M99429 | Ipomoea nil | AAD50278.1 | AF169830 | Glycine max |
| AAD09184.1 | AF089845 | Funaria hygrometrica | CAB61882.1 | AJ249996 | Lycopersicon esculentum |
| BAA04841.1 | D21817 | Lilium longiflorum | | | |
| AAD09185.1 | AF089846 | Funaria hygrometrica | SEQ ID NO. 241 | | |
| BAA04842.1 | D21818 | Lilium longiflorum | AAA33944.1 | J03920 | Glycine max |
| CAA63570.1 | X92983 | Pseudotsuga menziesii | CAA48300.1 | X68218 | Pisum sativum |
| CAA63571.1 | X92984 | Pseudotsuga menziesii | CAA48299.1 | X68217 | Pisum sativum |
| AAC39360.1 | U63631 | Fragaria x ananassa | AAA33945.1 | J03919 | Glycine max |
| AAD09178.1 | AF087640 | Funaria hygrometrica | CAA48297.1 | X68215 | Pisum sativum |
| AAD09182.1 | AF089843 | Funaria hygrometrica | CAA48298.1 | X68216 | Pisum sativum |
| BAA04840.1 | D21816 | Lilium longiflorum | | | |
| AAD30452.1 | AF123255 | Lycopersicon esculentum | | | |
| AAB63311.1 | U46545 | Helianthus annuus | | | |
| CAA31785.1 | X13431 | Triticum aestivum | | | |

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| AA050278.1 | AF169830 | Glycine max | AAF65770.1 | AF242312 | Euphorbia esula |
| SEQ ID NO. 242 | | | AA022975.1 | AF126551 | Solanum tuberosum subsp. |
| AA032142.1 | AF123504 | Nicotiana tabacum | tuberosum | | |
| CAA48297.1 | X68215 | Pisum sativum | AA03106.1 | AC073405 | Oryza sativa |
| CAA48298.1 | X68216 | Pisum sativum | CAA48638.1 | X68678 | Zea mays |
| AA032143.1 | AF123505 | Nicotiana tabacum | SEQ ID NO. 262 | | |
| AA032146.1 | AF123508 | Nicotiana tabacum | AA065777.1 | U97522 | Vitis vinifera |
| AAA33945.1 | J03919 | Glycine max | AA065776.1 | U97521 | Vitis vinifera |
| BAA85821.1 | AB026822 | Cucumis sativus | AA053609.1 | AF280437 | Secale cereale |
| AAA33944.1 | J03920 | Glycine max | CAA53626.1 | X76041 | Triticum aestivum |
| CAA48300.1 | X68218 | Pisum sativum | BAA03750.1 | D16222 | Oryza sativa |
| CAA48299.1 | X68217 | Pisum sativum | CAB01591.1 | Z78202 | Persea americana |
| AA013253.1 | AF0222013 | Lycopersicon esculentum | CAA30142.1 | X07130 | Solanum tuberosum |
| AA050278.1 | AF169830 | Glycine max | BAA03751.1 | D16223 | Oryza sativa |
| BAA95840.1 | AP002070 | Oryza sativa | SEQ ID NO. 263 | | |
| SEQ ID NO. 244 | | | AA010836.1 | U52079 | Solanum tuberosum |
| AA049376.1 | U43840 | Glycine max | BAA83352.1 | AP000391 | Oryza sativa |
| AA049374.1 | U43838 | Glycine max | BAA90508.1 | AP001111 | Oryza sativa |
| CAC24490.1 | AJ305033 | Pisum sativum | BAA90507.1 | AP001111 | Oryza sativa |
| AA049375.1 | U43839 | Glycine max | BAA94511.1 | AB041505 | Populus nigra |
| SEQ ID NO. 249 | | | SEQ ID NO. 265 | | |
| CAA48630.1 | X68664 | Solanum tuberosum | AA035496.1 | AF052690 | Raphanus sativus |
| AA029840.1 | AF307843 | Chlamydomonas reinhardtii | AA099310.1 | AF052585 | Malus x domestica |
| AA029839.1 | AF307842 | Chlamydomonas reinhardtii | AA099309.1 | AF052584 | Malus x domestica |
| SEQ ID NO. 251 | | | AA027547.1 | AF269128 | Brassica nigra |
| AA008401.1 | AF053564 | Mesembryanthemum crystallinum | AA027696.1 | AF016011 | Brassica napus |
| AA014454.1 | AF283706 | Tulipa gesneriana | AA027694.1 | AF016009 | Brassica napus |
| AA014455.1 | AF283707 | Tulipa gesneriana | AA027695.1 | AF016010 | Brassica napus |
| AA014456.1 | AF283708 | Tulipa gesneriana | AA027546.1 | AF269126 | Brassica nigra |
| SEQ ID NO. 257 | | | AA024863.1 | AF300700 | Ipomoea nil |
| BAA02720.1 | D13502 | Glycine max | AA022518.1 | AF001136 | Pinus radiata |
| SEQ ID NO. 259 | | | BAA33205.1 | AB001887 | Oryza sativa |
| BAA84791.1 | AP000559 | Oryza sativa | BAA33201.1 | AB001883 | Oryza sativa |
| CAA10766.1 | AJ132763 | Pseudotsuga menziesii | BAA33203.1 | AB001885 | Oryza sativa |
| AA005639.1 | AF052206 | Chlamydomonas reinhardtii | BAA33206.1 | AB001888 | Oryza sativa |
| | | | BAA33202.1 | AB001884 | Oryza sativa |
| | | | BAA33204.1 | AB001886 | Oryza sativa |
| | | | BAA33200.1 | AB001882 | Oryza sativa |

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| SEQ ID NO. 268 | CAA46990.1 | X66284 | Solanum tuberosum | BAB21589.1 | AB036786 | Oryza sativa |
| CAA56520.1 | X80236 | AAF06970.1 | Solanum tuberosum | AAF06970.1 | AF162662 | Kalanchoe fedtschenkoi |
| AAG42149.1 | AY011123 | AAF06969.1 | Dactylis glomerata | AAF06969.1 | AF162661 | Kalanchoe fedtschenkoi |
| AAK07827.1 | AF297643 | CAA41172.1 | Cucumis melo | CAA41172.1 | X58194 | Oryza sativa |
| CRA56521.1 | X80237 | CAA65500.1 | Solanum tuberosum | CAA65500.1 | X96723 | Medicago sativa |
| CRA56519.1 | X80235 | BAA12691.1 | Solanum tuberosum | BAA12691.1 | D84507 | Zea mays |
| BAA04964.1 | D25241 | AAAB47181.1 | Solanum tuberosum | AAAB47181.1 | S82324 | Zea mays |
| | | CAA07481.1 | Oryza sativa | CAA07481.1 | AJ007366 | Zea mays |
| | | | | AAF40430.1 | AF234652 | Mesembryanthemum crystalli |
| SEQ ID NO. 274 | | | | | | |
| BAA92986.1 | AP001550 | Oryza sativa | | SEQ ID NO. 276 | | |
| AAF19807.1 | AF180356 | Brassica oleracea | | AAK30202.1 | AF349961 | Daucus carota |
| AAF19403.1 | AF203481 | Lycopersicon esculentum | | AAA53296.1 | L18908 | Nicotiana tabacum |
| AAF19402.1 | AF203480 | Lycopersicon esculentum | | CAA63112.1 | X92367 | Spinacia oleracea |
| BAA05648.1 | D26601 | Nicotiana tabacum | | CAA63107.1 | X92350 | Spinacia oleracea |
| AAF23901.2 | AF194414 | Oryza sativa | | AAAB6852.1 | AF031542 | Fritillaria agrestis |
| AAC04324.1 | U73937 | Nicotiana tabacum | | AAC24573.1 | AF061508 | Zea mays |
| AAF23900.1 | AF194413 | Oryza sativa | | CAA62040.1 | X90414 | Spinacia oleracea |
| BAA34675.1 | AB011670 | Triticum aestivum | | | | |
| BAA13440.1 | D87707 | Ipomoea batatas | | SEQ ID NO. 277 | | |
| AAD17800.1 | AF090835 | Mesembryanthemum crystallinum | | BAA08104.1 | D45074 | Panicum miliaceum |
| CAA57157.1 | X81394 | Oryza sativa | | BAA08103.1 | D45073 | Panicum miliaceum |
| AAD23582.1 | AF128443 | Glycine max | | BAA08105.1 | D45075 | Panicum miliaceum |
| CAA39936.1 | X56599 | Daucus carota | | CAA72107.1 | Y11220 | Solanum tuberosum |
| BAA12715.1 | D85039 | Zea mays | | CAC12820.1 | AJ299250 | Nicotiana tabacum |
| CAA58750.1 | X83869 | Daucus carota | | AAAB71744.1 | U75346 | Chlamydomonas reinhardtii |
| AAAB0693.1 | U69174 | Glycine max | | AAAB71743.1 | U75345 | Chlamydomonas reinhardtii |
| AAF21062.1 | AF216527 | Dunaliella tertiolecta | | CAA07568.1 | AJ007580 | Ribes nigrum |
| AAD28192.2 | AF115406 | Solanum tuberosum | | CAA56325.1 | X80023 | Triticum turgidum |
| BAA05649.1 | D26602 | Nicotiana tabacum | | CAA46311.1 | X65194 | Chlamydomonas reinhardtii |
| AAA69507.1 | U28376 | Zea mays | | CAA67107.1 | X98474 | Solanum tuberosum |
| AAAB05457.1 | U55768 | Oryza sativa | | CAC27140.1 | AJ132535 | Picea abies |
| AAG36872.1 | AF239819 | Zea mays | | CAA69726.1 | Y08499 | Betula pendula |
| CAA89202.1 | Z49233 | Chlamydomonas eugametos | | BAA31583.1 | AB016064 | Zea mays |
| CAA72362.1 | Y11649 | Zea mays | | CAB61741.1 | AJ275306 | Cicer arietinum |
| CAA72290.1 | Y11526 | Zea mays | | BAA31584.1 | AB016065 | Oryza sativa |
| CAA43659.1 | X61387 | Zea mays | | BAA92520.1 | AP001383 | Oryza sativa |
| CAA65244.1 | X95997 | Solanum tuberosum | | | | |
| AAF76187.1 | AF271237 | Zea mays | | SEQ ID NO. 278 | | |
| BAB21591.1 | AB036788 | Oryza sativa | | CAA64729.1 | X95462 | Brassica napus |
| | | | | AAAB20114.2 | S60064 | Brassica napus |

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|----------------|----------|----------------------------|----------------|----------------|----------|-------------------------------|
| CAA74177.1 | Y13862 | Nicotiana tabacum | SEQ ID NO. 292 | AAF36996.1 | AF236092 | Brassica oleracea var. bot |
| CAA74176.1 | Y13861 | Nicotiana tabacum | | AAF29973.1 | AF188060 | Adonis palaeastina |
| CRA05879.1 | AJ003124 | Petunia x hybrida | | AB67743.1 | U48963 | Clarkia breweri |
| CAA05816.1 | AJ003025 | Oryza sativa | | BAB40973.1 | AB049815 | Nicotiana tabacum |
| AAFI4562.1 | AF181724 | Brassica napus | | AAF29974.1 | AF188061 | Adonis palaeastina |
| AAFI4561.1 | AF181723 | Brassica napus | | AAF29978.1 | AF188065 | Oryza sativa |
| AAFI4563.1 | AF181725 | Brassica oleracea | | BAB40974.1 | AB049816 | Nicotiana tabacum |
| BAA13547.1 | D88156 | Hyoscyamus niger | | AAF29976.1 | AF188063 | Lactuca sativa |
| BAA85844.1 | AB026544 | Hyoscyamus niger | | CAA57947.1 | X82627 | Clarkia breweri |
| AAA33281.1 | I20473 | Datura stramonium | | AAF29977.1 | AF188064 | Tagetes erecta |
| CAC19810.1 | AJ292343 | Solanum tuberosum | | AAB94132.1 | AF031079 | Camptotheca acuminata |
| CAB52307.1 | AJ245634 | Solanum tuberosum | | AAB94133.1 | AF031080 | Camptotheca acuminata |
| AAB09776.1 | I20485 | Hyoscyamus niger | | AAB67742.1 | U48962 | Clarkia xantiana |
| BAA85845.1 | AB026545 | Hyoscyamus niger | | AAG10423.1 | AF251011 | Tagetes erecta |
| CAC34420.1 | AJ307584 | Solanum tuberosum | | AAF29975.1 | AF188062 | Lactuca sativa |
| AAA33282.1 | I20474 | Datura stramonium | | AAD41766.1 | AF111843 | Hevea brasiliensis |
| AAA33280.1 | I20475 | Datura stramonium | | AAD41765.1 | AF111842 | Hevea brasiliensis |
| SEQ ID NO. 279 | | | | AAC32208.1 | AF082325 | Haematococcus pluvialis |
| BAA29041.1 | AB015615 | Oryza sativa | | AAC32209.1 | AF082326 | Haematococcus pluvialis |
| AAB97167.1 | AF030882 | Zea mays | | BAA33978.1 | AB019034 | Haematococcus pluvialis |
| AAA91298.1 | U18908 | Zea mays | | CAA70850.1 | Y09634 | Nicotiana tabacum |
| AAD33889.1 | AF142589 | Hordeum vulgare | | AAC32601.1 | AF082869 | Chlamydomonas reinhardtii |
| AAD33890.1 | AF142590 | Triticum aestivum | | AAF91499.1 | AF227951 | Daucus carota |
| AAD33891.1 | AF142591 | Solanum tuberosum | | | | |
| AAD53260.1 | AF142588 | Hordeum vulgare | | SEQ ID NO. 293 | | |
| SEQ ID NO. 281 | | | | AAC26828.1 | AF075603 | Oryza sativa |
| AAD17487.1 | AF049347 | Berberis stolonifera | | AAB93832.1 | U81960 | Zea mays |
| AAB20352.1 | S65550 | Eschscholzia californica | | AAC36698.1 | AF075580 | Mesembryanthemum crystallinum |
| AAC39358.1 | AF005655 | Eschscholzia californica | | AAD17804.1 | AF092431 | Lotus japonicus |
| AAC61839.1 | AF025430 | Papaver somniferum | | AAD17805.1 | AF092432 | Lotus japonicus |
| SEQ ID NO. 283 | | | | AAC36700.1 | AF075582 | Mesembryanthemum crystallinum |
| CRA90427.1 | Z50099 | Solanum tuberosum | | CAA72341.1 | Y11607 | Medicago sativa |
| CAA75777.1 | Y15781 | Capsicum annuum | | AAG43835.1 | AF213455 | Zea mays |
| CAB86609.1 | Z46648 | Craterostigma plantagineum | | CAC10359.1 | AJ277087 | Nicotiana tabacum |
| CAB86608.1 | Z46647 | Craterostigma plantagineum | | CAC10358.1 | AJ277086 | Nicotiana tabacum |
| CAB86607.1 | Z46646 | Craterostigma plantagineum | | AAC36697.1 | AF075579 | Mesembryanthemum crystallinum |
| BAA76432.1 | AB025004 | Cicer arietinum | | AAC36699.1 | AF075581 | Mesembryanthemum crystallinum |
| | | | | CAC09575.1 | AJ298987 | Fagus sylvatica |
| | | | | SEQ ID NO. 294 | | |

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|------------|----------|---------------------------------|----------------|----------|---------------------------|
| CAA12646.1 | AJ225806 | Egeria densa | AAF13731.1 | AF002248 | Pisum sativum |
| AAC50046.1 | U46758 | Oryza sativa | AAC67557.1 | AF094775 | Oryza sativa |
| AAB97617.1 | U83687 | Apium graveolens | AAF90200.1 | AF287276 | Hordeum vulgare |
| AAB41555.1 | U13924 | Medicago sativa subsp. sativa | CAA33330.1 | X15258 | Lycopersicon esculentum |
| AAB41556.1 | U13925 | Medicago sativa subsp. sativa | CAA41407.1 | X58517 | Pinus sylvestris |
| BAA12084.1 | D83718 | Glycyrrhiza echinata | CAA45523.1 | X64198 | Nicotiana tabacum |
| BAA13114.1 | D86559 | Glycyrrhiza glabra | AAD27882.2 | AF139470 | Vigna radiata |
| BAA13113.1 | D86558 | Glycyrrhiza glabra | AAA34140.1 | M17633 | Lycopersicon esculentum |
| | | | AAA34143.1 | M32605 | Lycopersicon esculentum |
| | | | CAA49209.1 | X69434 | Pyrobotrys stellata |
| | | Nicotiana tabacum | CAA50763.1 | X71965 | Pyrobotrys stellata |
| | | Oryza sativa | AAF44703.1 | AF241525 | Alonsoa meridionalis |
| | | Triticum aestivum | AAF23819.1 | AF218305 | Hordeum vulgare |
| | | Triticum aestivum | AAA64416.1 | U23190 | Zea mays |
| | | Triticum aestivum | AAC67558.1 | AF094776 | Oryza sativa |
| | | Oryza sativa | AAA34186.1 | J03558 | Lycopersicon esculentum |
| | | Oryza sativa | AAA34146.1 | M32606 | Lycopersicon esculentum |
| | | Picea mariana | CAA41404.1 | X58514 | Pinus sylvestris |
| | | Picea abies | CAA41405.1 | X58515 | Pinus sylvestris |
| | | Picea mariana | CAA57408.1 | X81809 | Picea abies |
| | | Glycine max | CAA57409.1 | X81810 | Picea abies |
| | | Nicotiana tabacum | AAA33949.1 | M21396 | Glycine max |
| | | Dendrobium grex Madame Thong-In | BAA25395.1 | AB012640 | Nicotiana sylvestris |
| | | Oryza sativa | BAA25393.1 | AB012638 | Nicotiana sylvestris |
| | | Nicotiana tabacum | CAA47950.1 | X67714 | Pinus contorta |
| | | Oryza sativa | CAA44777.1 | X63052 | Hordeum vulgare |
| | | Oryza sativa | AAC78690.1 | S73603 | Pinus thunbergii |
| | | Nicotiana tabacum | AAA50172.1 | U01964 | Glycine max |
| | | Oryza sativa | AAD27879.2 | AF139467 | Vigna radiata |
| | | Oryza sativa | AAA34056.1 | M21398 | Nicotiana plumbaginifolia |
| | | Nicotiana tabacum | CAA41187.1 | X58229 | Nicotiana tabacum |
| | | Oryza sativa | AAA68425.1 | M34396 | Polystichum munitum |
| | | Dendrobium grex Madame Thong-In | | | |
| | | | SEQ ID NO. 298 | | |
| | | | AAB70241.1 | AF016845 | Lycopersicon esculentum |
| | | Petunia x hybrida | CAB52219.1 | Y18519 | Silene latifolia |
| | | Lycopersicon esculentum | AAF97517.1 | AF250047 | Zea mays |
| | | Lycopersicon esculentum | CAB52218.1 | Y18517 | Silene latifolia |
| | | Pisum sativum | AAF97518.1 | AF250048 | Zea mays |
| | | Pinus sylvestris | AAF27919.1 | AF220203 | Malus x domestica |
| | | Nicotiana tabacum | AAF97519.1 | AF250049 | Zea mays |
| | | | | | |
| | | | SEQ ID NO. 296 | | |
| | | | AAA33711.1 | M21317 | Lycopersicon esculentum |
| | | | AAA34159.1 | M20241 | Silene latifolia |
| | | | CAA32197.1 | X14036 | Zea mays |
| | | | CAA57492.1 | X81962 | Silene latifolia |
| | | | CAA41406.1 | X58516 | Zea mays |
| | | | CAA57877.1 | X82497 | Malus x domestica |

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|----------------|----------|-------------------------|----------------|----------|-----------------------------|
| AAK19620.1 | AF336287 | Gossypium hirsutum | AAB29483.1 | S68079 | Brassica napus |
| BAA76895.1 | AB022686 | Lycopersicon esculentum | AAB29484.1 | S68727 | Brassica napus |
| AAC18914.1 | U94748 | Petunia x hybrida | SEQ ID NO. 310 | | |
| BAA76896.1 | AB022687 | Lycopersicon esculentum | AAC49184.1 | U04002 | Hevea brasiliensis |
| SEQ ID NO. 299 | | | CAA11219.1 | AJ223281 | Manihot esculenta |
| AAB70241.1 | AF016845 | Lycopersicon esculentum | CAA82334.1 | Z29091 | Manihot esculenta |
| CAB52219.1 | Y18519 | Silene latifolia | SEQ ID NO. 313 | | |
| CAB52218.1 | Y18517 | Silene latifolia | AAA80575.1 | U13148 | Pennisetum ciliare |
| AAF97517.1 | AF250047 | Zea mays | AAF34174.1 | AF195243 | Chlamydomonas reinhardtii |
| AAF97518.1 | AF250048 | Zea mays | SEQ ID NO. 314 | | |
| AAK19620.1 | AF336287 | Gossypium hirsutum | AAA34085.1 | M93436 | Nicotiana tabacum |
| AAF97519.1 | AF250049 | Zea mays | AAA34054.1 | M96432 | Nicotiana tabacum |
| AAC18914.1 | U94748 | Petunia x hybrida | BAB41080.1 | AB052729 | Pisum sativum |
| BAA76895.1 | AB022686 | Lycopersicon esculentum | SEQ ID NO. 315 | | |
| AAF37386.1 | AF134835 | Medicago truncatula | CAA67291.1 | X98739 | Pisum sativum |
| AAB63030.1 | U83921 | Daucus carota | CAA67290.1 | X98738 | Pisum sativum |
| SEQ ID NO. 300 | | | CAA10643.1 | AJ132349 | Antirrhinum majus |
| AAF97517.1 | AF250047 | Zea mays | SEQ ID NO. 316 | | |
| CAB52219.1 | Y18519 | Silene latifolia | AAB97366.1 | AF039531 | Oryza sativa |
| CAB52218.1 | Y18517 | Silene latifolia | SEQ ID NO. 317 | | |
| AAF97518.1 | AF250048 | Zea mays | AAK15322.1 | AF332134 | Chloroplast Medicago sativa |
| AAF97519.1 | AF250049 | Zea mays | BAA33755.2 | AB017480 | Nicotiana tabacum |
| AAB70241.1 | AF016845 | Lycopersicon esculentum | AAD17230.1 | AF117339 | Nicotiana tabacum |
| BAA76895.1 | AB022686 | Lycopersicon esculentum | CAA09935.1 | AJ012165 | Capsicum annuum |
| AAF27919.1 | AF220203 | Malus x domestica | BAA57906.1 | AB001684 | Chlorella vulgaris |
| BAA76896.1 | AB022687 | Lycopersicon esculentum | CAA06853.1 | AJ006095 | Cicer arietinum |
| SEQ ID NO. 305 | | | SEQ ID NO. 318 | | |
| AAB94599.1 | AF024652 | Glycine max | AAF01467.1 | AF190450 | Avicennia marina |
| AAB94598.1 | AF024651 | Glycine max | SEQ ID NO. 319 | | |
| SEQ ID NO. 308 | | | AAC61839.1 | AF025430 | Papaver somniferum |
| CAA54255.1 | X76932 | Spinacia oleracea | AAC39358.1 | AF005655 | Eschscholzia californica |
| CAA58020.1 | X82776 | Pisum sativum | AAB20352.1 | S65550 | Eschscholzia californica |
| SEQ ID NO. 309 | | | AAD17487.1 | AF049347 | Berberis stolonifera |
| AAB29482.1 | S68726 | Brassica napus | | | |
| AAA66068.1 | U14665 | Brassica napus | | | |
| AAA52230.1 | U16751 | Brassica oleracea | | | |

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|----------------|----------------|------------|-------------------------|-----------------------|
| SEQ ID NO. 320 | SEQ ID NO. 331 | CAA55047.1 | X78213 | Parthenium argentatum |
| AF215837 | CAA78387.1 | Z13997 | Petunia x hybrida | |
| AAAG43998.1 | CAA66952.1 | X98308 | Lycopersicon esculentum | |
| AF215852 | BAA88222.1 | AB028650 | Nicotiana tabacum | |
| AAAF74566.1 | BAA81731.1 | AB029160 | Glycine max | |
| AF215851 | BAA81730.1 | AB029159 | Glycine max | |
| AAAF74565.1 | ABA41101.1 | U72762 | Nicotiana tabacum | |
| AF215854 | BAA88224.1 | AB028652 | Nicotiana tabacum | |
| AAAF74568.1 | BAA88223.1 | AB028651 | Nicotiana tabacum | |
| AF215853 | BAA81732.1 | AB029161 | Glycine max | |
| AAAF74567.1 | BAA88221.1 | AB028649 | Nicotiana tabacum | |
| CAA68813.1 | BAA81736.1 | AB029165 | Glycine max | |
| Y07520 | BAA81733.2 | AB029162 | Glycine max | |
| X55349 | CAA72217.1 | Y11414 | Oryza sativa | |
| AB052885 | CAA72185.1 | Y11350 | Oryza sativa | |
| AB052885 | AAG13574.1 | AC037425 | Oryza sativa | |
| Z93775 | AAK19616.1 | AF336283 | Gossypium hirsutum | |
| X66856 | CAA78386.1 | Z13996 | Petunia x hybrida | |
| CAA47324.1 | CAA43399.1 | AJ006292 | Antirrhinum majus | |
| CAA53192.1 | CAA72218.1 | Y11415 | Oryza sativa | |
| BAB19863.1 | CAA67600.1 | X99210 | Lycopersicon esculentum | |
| AAAB06594.1 | CAA64614.1 | X95296 | Lycopersicon esculentum | |
| CAA04511.1 | AAG36774.1 | AF210616 | Zea mays | |
| AAA79761.1 | AAA33500.1 | M73028 | Zea mays | |
| CAA09419.1 | AAK19618.1 | AF336285 | Gossypium hirsutum | |
| CAA70777.1 | AAE22256.1 | AF161711 | Pimpinella brachycarpa | |
| CAB52689.1 | BAA23338.1 | D88618 | Oryza sativa | |
| BAB19862.1 | CAA67575.1 | X99134 | Lycopersicon esculentum | |
| CAB06079.1 | AAK19619.1 | AF336286 | Gossypium hirsutum | |
| BAA85398.1 | CAA72186.1 | Y11351 | Oryza sativa | |
| AAD55054.1 | CAA65525.1 | X96749 | Oryza sativa | |
| CAB52688.1 | AAK19611.1 | AF336278 | Gossypium hirsutum | |
| CAB52690.1 | BAA23337.1 | D88617 | Oryza sativa | |
| AAAF74025.1 | AAK19615.1 | AF336282 | Gossypium hirsutum | |
| BAB21545.1 | CAA72187.1 | Y11352 | Oryza sativa | |
| BAA20522.1 | CAA50221.1 | X70876 | Hordeum vulgare | |
| CAA67395.1 | CAA50224.1 | X70879 | Hordeum vulgare | |
| AAD38859.1 | CAA50222.1 | X70877 | Hordeum vulgare | |
| AAAB82146.1 | AAK19617.1 | AF336284 | Gossypium hirsutum | |
| SEQ ID NO. 324 | SEQ ID NO. 334 | CAA55047.1 | X78213 | Parthenium argentatum |
| AAB71078.1 | CAA78387.1 | Z13997 | Petunia x hybrida | |
| BAA92988.1 | CAA66952.1 | X98308 | Lycopersicon esculentum | |
| AAA91168.1 | BAA88222.1 | AB028650 | Nicotiana tabacum | |
| AAB71079.1 | BAA81731.1 | AB029160 | Glycine max | |
| U62752 | BAA81730.1 | AB029159 | Glycine max | |
| X66411 | ABA41101.1 | U72762 | Nicotiana tabacum | |
| CAA47042.1 | BAA88224.1 | AB028652 | Nicotiana tabacum | |
| AAD11446.1 | BAA88223.1 | AB028651 | Nicotiana tabacum | |
| U62749 | BAA81732.1 | AB029161 | Glycine max | |
| X86553 | BAA88221.1 | AB028649 | Nicotiana tabacum | |
| CAA60251.1 | BAA81736.1 | AB029165 | Glycine max | |
| U62751 | BAA81733.2 | AB029162 | Glycine max | |
| U62751 | CAA72217.1 | Y11414 | Oryza sativa | |
| U62751 | CAA72185.1 | Y11350 | Oryza sativa | |
| U62751 | AAG13574.1 | AC037425 | Oryza sativa | |
| U62751 | AAK19616.1 | AF336283 | Gossypium hirsutum | |
| U62751 | CAA78386.1 | Z13996 | Petunia x hybrida | |
| U62751 | CAA43399.1 | AJ006292 | Antirrhinum majus | |
| U62751 | CAA72218.1 | Y11415 | Oryza sativa | |
| U62751 | CAA67600.1 | X99210 | Lycopersicon esculentum | |
| U62751 | CAA64614.1 | X95296 | Lycopersicon esculentum | |
| U62751 | AAG36774.1 | AF210616 | Zea mays | |
| U62751 | AAA33500.1 | M73028 | Zea mays | |
| U62751 | AAK19618.1 | AF336285 | Gossypium hirsutum | |
| U62751 | AAE22256.1 | AF161711 | Pimpinella brachycarpa | |
| U62751 | BAA23338.1 | D88618 | Oryza sativa | |
| U62751 | CAA67575.1 | X99134 | Lycopersicon esculentum | |
| U62751 | AAK19619.1 | AF336286 | Gossypium hirsutum | |
| U62751 | CAA72186.1 | Y11351 | Oryza sativa | |
| U62751 | CAA65525.1 | X96749 | Oryza sativa | |
| U62751 | AAK19611.1 | AF336278 | Gossypium hirsutum | |
| U62751 | BAA23337.1 | D88617 | Oryza sativa | |
| U62751 | AAK19615.1 | AF336282 | Gossypium hirsutum | |
| U62751 | CAA72187.1 | Y11352 | Oryza sativa | |
| U62751 | CAA50221.1 | X70876 | Hordeum vulgare | |
| U62751 | CAA50224.1 | X70879 | Hordeum vulgare | |
| U62751 | CAA50222.1 | X70877 | Hordeum vulgare | |
| U62751 | AAK19617.1 | AF336284 | Gossypium hirsutum | |

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| CAA68235.1 | X99973 | Hordeum vulgare | BAA01855.1 | D11082 | Oryza sativa |
| SEQ ID NO. 334 | | | BAA01584.1 | D10752 | Oryza sativa |
| AAD25355.1 | AF115574 | Pisum sativum | AAD28284.1 | AF136268 | Oryza sativa subsp. japoni |
| AAB18669.1 | U11716 | Pisum sativum | CAA72987.1 | Y12320 | Triticum aestivum |
| AAA33662.1 | M18250 | Pisum sativum | AAG27621.1 | AF286317 | Triticum aestivum |
| | | | AAA82735.1 | U17897 | Zea mays |
| SEQ ID NO. 337 | | | BAA01854.1 | D11081 | Zea mays |
| CAA56319.1 | X80009 | Pisum sativum | AAC36471.1 | AF072724 | Zea mays |
| CAB40743.1 | AJ011885 | Solanum tuberosum | AAB61925.1 | AF002820 | Triticum aestivum |
| CAB40746.1 | AJ011888 | Solanum tuberosum | CAB40749.1 | AJ011891 | Solanum tuberosum |
| BAA82348.1 | AB029548 | Phaseolus vulgaris | CAB40745.1 | AJ011887 | Solanum tuberosum |
| CAB40748.1 | AJ011890 | Solanum tuberosum | CAB40744.1 | AJ011886 | Solanum tuberosum |
| AAD30186.1 | AF076679 | Triticum aestivum | BAA85762.1 | AB028067 | Nicotiana tabacum |
| BAA01616.1 | D10838 | Oryza sativa | BAB40335.1 | AB042940 | Ipomoea batatas |
| AAB67316.1 | U65948 | Zea mays | CAA49371.1 | X69713 | Manihot esculenta |
| CAB40747.1 | AJ011889 | Solanum tuberosum | CRA49370.1 | X69712 | Manihot esculenta |
| BAA82828.1 | AB023498 | Oryza sativa | AAC72336.1 | AF064563 | Hordeum vulgare |
| CAA03846.1 | AJ000004 | Solanum tuberosum | | | |
| CAA72154.1 | Y11282 | Triticum aestivum | SEQ ID NO. 339 | | |
| AAG27623.1 | AF286319 | Triticum aestivum | CAB96173.1 | AJ271719 | Spinacia oleracea |
| BAA03738.1 | D16201 | Oryza sativa | AAA21277.1 | U09194 | Mesembryanthemum crystallinum |
| AAD30187.1 | AF076680 | Aegilops tauschii | AAB34986.1 | S79242 | Mesembryanthemum crystallinum |
| AAC69754.1 | AF064561 | Hordeum vulgare | CAA41115.1 | X58108 | Lycopersicon esculentum |
| AAK26822.1 | AF338432 | Triticum aestivum | CAB75428.1 | AJ271785 | Lupinus luteus |
| CRA56320.1 | X80010 | Pisum sativum | CAB82232.1 | Z28386 | Ricinus communis |
| AAC33764.1 | AF072725 | Zea mays | CAC00533.1 | AJ132581 | Hevea brasiliensis |
| AAA18571.1 | L08065 | Zea mays | CAC00532.1 | AJ132580 | Hevea brasiliensis |
| AAB17086.1 | U66376 | Triticum aestivum | AAC49173.1 | U09450 | Oryza sativa |
| AAK26821.1 | AF338431 | Aegilops tauschii | AAD04187.1 | U17973 | Zea mays |
| AAC69753.1 | AF064560 | Hordeum vulgare | CAA39454.1 | X55981 | Zea mays |
| BAB40334.1 | AB042937 | Ipomoea batatas | CAA47043.1 | X66412 | Chlamydomonas reinhardtii |
| CAA54308.1 | X77012 | Manihot esculenta | CAA41116.1 | X58109 | Lycopersicon esculentum |
| CAA70038.1 | Y08786 | Solanum tuberosum | AAB35826.2 | S79816 | Echinocloa phyllopogon |
| BAA82349.1 | AB029549 | Phaseolus vulgaris | BAA04612.1 | D17767 | Oryza sativa |
| CAA49463.1 | X69805 | Solanum tuberosum | BAA34559.1 | AF082596 | Leavenworthia crassa |
| CAB40981.1 | AJ237897 | Triticum aestivum | AAC34558.1 | AF082595 | Leavenworthia stylosa |
| CAB40979.1 | AJ237897 | Triticum aestivum | AAC34557.1 | AF082594 | Leavenworthia uniflora |
| CAB40980.1 | AJ237897 | Triticum aestivum | AAC34555.1 | AF082592 | Leavenworthia stylosa |
| AAG27622.1 | AF286318 | Triticum aestivum | AAC34554.1 | AF082591 | Leavenworthia crassa |
| AAD50279.2 | AF169833 | Sorghum bicolor | AAD46409.1 | AF096253 | Lycopersicon esculentum |
| | | | AAC34556.1 | AF082593 | Leavenworthia uniflora |

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|----------------|-------------------------------|----------------|----------|-------------------------------|
| SEQ ID NO. 340 | Oryza sativa | BAA05622.1 | D26573 | Daucus carota |
| BAA78764.1 | Populus nigra | AAD37699.1 | AF145730 | Oryza sativa |
| BAA94509.1 | Brassica napus | SEQ ID NO. 342 | | |
| AAG16628.1 | Populus nigra | AAK21965.1 | AY028699 | Brassica napus |
| BAA94510.1 | Lophopyrum elongatum | AAG03090.1 | AC073405 | Oryza sativa |
| AAK11674.1 | Lophopyrum elongatum | BAA94509.1 | AB041503 | Populus nigra |
| AAF43496.1 | Brassica napus | AAG16628.1 | AY007545 | Brassica napus |
| AAK21965.1 | Oryza sativa | AAB61708.1 | U93048 | Daucus carota |
| AAG03090.1 | Glycine max | BAA94510.1 | AB041504 | Populus nigra |
| AAF91336.1 | Glycine max | AAF43496.1 | AF131222 | Lophopyrum elongatum |
| AAF91337.1 | Glycine max | AAK11674.1 | AF339747 | Lophopyrum elongatum |
| CAB51834.1 | Oryza sativa | AAF91323.1 | AF244889 | Glycine max |
| AAK61805.1 | Lycopersicon esculentum | AAF91324.1 | AF244890 | Glycine max |
| AAG33377.1 | Oryza meyeriana | CAA73134.1 | Y12531 | Brassica oleracea |
| AAC27894.1 | Zea mays | AAF91322.1 | AF244888 | Glycine max |
| AAC27895.1 | Zea mays | AAC61805.1 | U28007 | Lycopersicon esculentum |
| AAB61708.1 | Daucus carota | AAF76313.1 | AF220603 | Lycopersicon esculentum |
| CAA97692.1 | Catharanthus roseus | AAB47421.1 | U59316 | Lycopersicon esculentum |
| AAK11566.1 | Lycopersicon hirsutum | AAB09771.1 | U67422 | Zea mays |
| AAG25966.1 | Nicotiana tabacum | CAC20842.1 | AJ250467 | Pinus sylvestris |
| AAG00510.1 | Phaseolus vulgaris | AAF34428.1 | AF172282 | Oryza sativa |
| AAB47424.1 | Lycopersicon pimpinellifolium | AAK11568.1 | AF318492 | Lycopersicon hirsutum |
| AAF76307.1 | Lycopersicon pimpinellifolium | AAK11569.1 | AF318493 | Lycopersicon hirsutum |
| AAF66615.1 | Nicotiana tabacum | AAC23542.1 | U20948 | Ipomoea trifida |
| AAK11567.1 | Lycopersicon hirsutum | AAB93834.1 | U82481 | Zea mays |
| CAA73134.1 | Brassica oleracea | AAF76307.1 | AF220602 | Lycopersicon pimpinellifolium |
| SEQ ID NO. 341 | | AAK11567.1 | AF318491 | Lycopersicon hirsutum |
| AAG43283.1 | Oryza sativa | AAB47424.1 | U59317 | Lycopersicon pimpinellifolium |
| AAD37698.1 | Oryza sativa | AAF59906.1 | AF197947 | Glycine max |
| AAF01765.1 | Glycine max | AAF59905.1 | AF197946 | Glycine max |
| CAA62608.1 | Lycopersicon esculentum | BAA92954.1 | AP001551 | Oryza sativa |
| BAA21017.1 | Daucus carota | CAA97692.1 | Z73295 | Catharanthus roseus |
| CRA64491.1 | Pimpinella brachycarpa | SEQ ID NO. 344 | | |
| CAA64152.1 | Pimpinella brachycarpa | BAA06108.1 | D29629 | Cucurbita sp. |
| AAD38144.1 | Prunus armeniaca | AAC26045.1 | AF073507 | Citrus limon |
| AAA63768.2 | Helianthus annuus | AAG28426.1 | AF194945 | Nicotiana tabacum |
| BAA93465.1 | Physcomitrella patens | CAA58047.1 | X82840 | Cucumis melo |
| CAA06728.1 | Craterostigma plantagineum | SEQ ID NO. 345 | | |
| BAA93467.1 | Physcomitrella patens | | | |

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|----------------|----------|----------------------------|----------------|----------|---------------------------|
| BAB03447.1 | AP002817 | Oryza sativa | CAA73134.1 | Y12531 | Brassica oleracea |
| BAA92400.1 | AP001366 | Oryza sativa | AAA33000.1 | M76647 | Brassica oleracea |
| BAA84803.1 | AP000559 | Oryza sativa | AAB93834.1 | U82481 | Zea mays |
| CAA63102.2 | X92205 | Petunia x hybrida | CAB89179.1 | AJ245479 | Brassica napus subsp. nap |
| CAA63101.1 | X92204 | Petunia x hybrida | BAA92836.1 | AB032473 | Brassica oleracea |
| SEQ ID NO. 348 | | | CAA79355.1 | Z18921 | Brassica oleracea |
| CAB61745.1 | AJ275311 | Cicer arietinum | AAA33008.1 | M97667 | Brassica napus |
| SEQ ID NO. 350 | | | AAA62232.1 | U00443 | Brassica napus |
| BAA05539.1 | D26538 | Oryza sativa | BAA06285.1 | D30049 | Brassica rapa |
| AAB66889.1 | AF010584 | Oryza sativa | BAA21132.1 | D88193 | Brassica rapa |
| BAA74736.1 | AB016809 | Citrus unshiu | AAC23542.1 | U20948 | Ipomoea trifida |
| SEQ ID NO. 354 | | | BAA92837.1 | AB032474 | Brassica oleracea |
| AAB71743.1 | U75345 | Chlamydomonas reinhardtii | BAA07576.1 | D38563 | Brassica rapa |
| AAB71744.1 | U75346 | Chlamydomonas reinhardtii | BAA07577.2 | D38564 | Brassica rapa |
| BAA92520.1 | AP001383 | Oryza sativa | BAA23676.1 | AB000970 | Brassica rapa |
| CRA07568.1 | AJ007580 | Ribes nigrum | CAA74662.1 | Y14286 | Brassica oleracea |
| CAC27140.1 | AJ132535 | Picea abies | BAB21001.1 | AB054061 | Brassica rapa |
| CAA56325.1 | X80023 | Triticum turgidum | CAA73133.1 | Y12530 | Brassica oleracea |
| CAC12820.1 | AJ299250 | Nicotiana tabacum | CAA67145.1 | X98520 | Brassica oleracea |
| SEQ ID NO. 360 | | | CAB41878.1 | Y18259 | Brassica oleracea |
| CAA72681.1 | Y11931 | Nicotiana rustica | CAA74661.1 | Y14285 | Brassica oleracea |
| CAA63777.1 | X93564 | Solanum tuberosum | CAB41879.1 | Y18260 | Brassica oleracea |
| AA74441.1 | U25027 | Glycine max | AAD52097.1 | AF088885 | Nicotiana tabacum |
| AAD26119.1 | AF108123 | Brassica napus | AAK21965.1 | AY028699 | Brassica napus |
| SEQ ID NO. 361 | | | AAA33915.1 | L27821 | Oryza sativa |
| AAC33765.1 | AF072849 | Oryza sativa subsp. indica | CAB51836.1 | AJ243961 | Oryza sativa |
| SEQ ID NO. 362 | | | BAA92954.1 | AP001551 | Oryza sativa |
| AAF34800.1 | AF227980 | Euphorbia esula | BAA82556.1 | AB030083 | Populus nigra |
| SEQ ID NO. 363 | | | SEQ ID NO. 368 | | Oryza sativa |
| BAA22813.1 | D26015 | Nicotiana tabacum | BAB16860.1 | AP002537 | |
| BAB21205.1 | AP002913 | Oryza sativa | SEQ ID NO. 373 | | Avena sativa |
| SEQ ID NO. 366 | | | CAB06081.1 | Z83832 | |
| AAD21872.1 | AF078082 | Phaseolus vulgaris | SEQ ID NO. 374 | | |
| | | | BAB32917.1 | AP003047 | Oryza sativa |
| | | | CAB56058.1 | AJ133787 | Oryza sativa |
| | | | SEQ ID NO. 375 | | |
| | | | AAB67721.1 | AF015269 | Zea mays |

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|----------------|------------|-----------|---------------------------------|----------------|----------|-----------------------------|
| SEQ ID NO. 379 | AAA17732.1 | L19074 | Catharanthus roseus | AAD41006.1 | AF107023 | Triticum aestivum |
| AAB94586.1 | AF022457 | L19074 | Glycine max | BAA87331.1 | AB012694 | Lilium longiflorum |
| AAK31592.1 | AY029178 | AY029178 | Brassica rapa subsp. pekinensis | AAB86857.1 | AF031547 | Fritillaria agrestis |
| CAA89260.1 | Z49263 | Z49263 | Pisum sativum | CAA07233.1 | AJ006767 | Cicer arietinum |
| AAB94588.1 | AF022459 | AF022459 | Glycine max | AAA50303.1 | L34578 | Pisum sativum |
| BAB40322.1 | AB036772 | AB036772 | Triticum aestivum | CAA77867.1 | Z11842 | Lycopersicon esculentum |
| AAG33645.1 | AF0922917 | AF0922917 | Vicia sativa | AAF64525.1 | AF253416 | Lycopersicon chilense |
| AAD10204.1 | AF030260 | AF030260 | Vicia sativa | AAB03076.1 | U01890 | Lycopersicon pennellii |
| CAA70575.1 | Y09423 | Y09423 | Nepeta racemosa | SEQ ID NO. 396 | | Glycine max |
| BAA22422.1 | AB001379 | AB001379 | Glycyrrhiza echinata | CAA85320.1 | Z36749 | |
| AAA32913.1 | M32885 | M32885 | Persea americana | SEQ ID NO. 402 | | Glycine max |
| AAG14962.1 | AF214008 | AF214008 | Brassica napus | AAD40979.1 | AF089851 | Cicer arietinum |
| AAG14961.1 | AF214007 | AF214007 | Brassica napus | CAA08855.1 | AJ009825 | Canavalia lineata |
| BAA93634.1 | AB025016 | AB025016 | Lotus japonicus | AAD49420.1 | AF172681 | Pisum sativum |
| SEQ ID NO. 386 | | | | BAA77206.1 | AB026253 | Pisum sativum |
| AAG14454.1 | AF283706 | AF283706 | Tulipa gesneriana | AAA62490.1 | L39931 | Pisum sativum |
| AAG14456.1 | AF283708 | AF283708 | Tulipa gesneriana | CAA45526.1 | X64201 | Lens culinaris |
| AAG14455.1 | AF283707 | AF283707 | Tulipa gesneriana | AAB34918.2 | S78994 | Lens culinaris |
| AAC08401.1 | AF053564 | AF053564 | Mesembryanthemum crystallinum | CAA06833.1 | AJ006052 | Cicer arietinum |
| SEQ ID NO. 393 | | | | SEQ ID NO. 413 | | |
| CAA73171.1 | Y12599 | Y12599 | Apium graveolens | AAD21872.1 | AF078082 | Phaseolus vulgaris |
| AAA50578.1 | U03391 | U03391 | Lycopersicon esculentum | AAB93834.1 | U82481 | Zea mays |
| AAK29450.1 | AF352247 | AF352247 | Pisum sativum | CAA73134.1 | Y12531 | Brassica oleracea |
| AAC41651.1 | I29456 | I29456 | Nicotiana tabacum | AAC23542.1 | U20948 | Ipomoea trifida |
| AAK29452.1 | AF352249 | AF352249 | Lathyrus sativus | CAA67145.1 | X98520 | Brassica oleracea |
| AAK29454.1 | AF352251 | AF352251 | Lens culinaris | BAA23676.1 | AB000970 | Brassica rapa |
| AAK29456.1 | AF352253 | AF352253 | Lens culinaris | CAA41878.1 | Y18259 | Brassica oleracea |
| AAK29453.1 | AF352250 | AF352250 | Lathyrus sativus | CAA73133.1 | Y12530 | Brassica oleracea |
| BAB88671.1 | AB029614 | AB029614 | Nicotiana tabacum | CAA41879.1 | Y18260 | Brassica oleracea |
| AAK29449.1 | AF352246 | AF352246 | Pisum sativum | CAA74662.1 | Y14286 | Brassica oleracea |
| AAK29455.1 | AF352252 | AF352252 | Lens culinaris | AAA62232.1 | U00443 | Brassica napus |
| AAK29451.1 | AF352248 | AF352248 | Pisum sativum | AAA33000.1 | M76647 | Brassica oleracea |
| CAA12232.1 | AJ224933 | AJ224933 | Lycopersicon esculentum | CAA74661.1 | Y14285 | Brassica oleracea |
| CAA29123.1 | X05636 | X05636 | Pisum sativum | BAA92836.1 | AB032473 | Brassica oleracea |
| AAE27930.1 | AF222804 | AF222804 | Euphorbia esula | CAB89179.1 | AJ245479 | Brassica napus subsp. napus |
| CAA40362.1 | X57077 | X57077 | Zea mays | AAA33008.1 | M97667 | Brassica napus |
| CAA44529.2 | X59872 | X59872 | Triticum aestivum | BAA21132.1 | D88193 | Brassica rapa |
| | | | | BAA06285.1 | D30049 | Brassica rapa |

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| BAB39687.1 | AB022917 | Marchantia paleacea var. | AAC01746.1 | AF044489 | Oryza sativa |
| diptera | | | AAF78016.1 | AF238472 | Oryza sativa |
| AAB67863.1 | U56698 | Ceratodon purpureus | AAD44029.1 | AF085164 | Hordeum vulgare |
| AAB19058.1 | U72993 | Ceratodon purpureus | AAD46416.1 | AF100766 | Oryza sativa |
| CAA43698.1 | X61458 | Selaginella martensii | AAF68400.1 | AF237570 | Oryza sativa |
| CAA52933.1 | X75025 | Physcomitrella patens | AAF78021.1 | AF238477 | Oryza sativa |
| AAB41397.1 | U56729 | Sorghum bicolor | AAF68397.1 | AF237567 | Oryza sativa |
| AAA33957.1 | L34842 | Glycine max | AAD46916.1 | AF164020 | Oryza sativa |
| CAA32242.1 | X14077 | Pisum sativum | AAD44032.1 | AF085167 | Hordeum vulgare |
| AAA33682.1 | M37217 | Pisum sativum | AAD44031.1 | AF085166 | Hordeum vulgare |
| AAB21533.2 | S84872 | Solanum tuberosum | BAB39437.1 | AF003338 | Oryza sativa |
| AAB47994.1 | U84970 | Lathyrus sativus | AAF78019.1 | AF238475 | Oryza sativa |
| AAA33115.1 | M15265 | Cucurbita pepo | | | |
| CAA04679.1 | AJ001318 | Populus tremula x Populus | SEQ ID NO. 420 | | |
| tremuloides | | | AA73563.1 | L16767 | Nicotiana tabacum |
| BAA99408.1 | AB036762 | Armoracia rusticana | AAA34109.1 | L16787 | Nicotiana tabacum |
| BAA99410.1 | AB036764 | Armoracia rusticana | CAA98188.1 | Z73960 | Lotus japonicus |
| BAA99409.1 | AB036763 | Armoracia rusticana | CAA98187.1 | Z73959 | Lotus japonicus |
| AAB41398.2 | AF182394 | Sorghum bicolor | AAD18006.1 | AF112244 | Zea mays |
| BAA31856.1 | AB016168 | Adiantum capillus-veneris | CAA98168.1 | Z73940 | Lotus japonicus |
| BAA31710.1 | AB016151 | Adiantum capillus-veneris | CAA89049.1 | Z49190 | Beta vulgaris |
| CAA74992.1 | Y14676 | Nicotiana plumbaginifolia | AAA34254.1 | L08131 | Volvox carteri |
| AAA34092.1 | L10114 | Nicotiana tabacum | CAA98182.1 | Z73954 | Lotus japonicus |
| CAA74908.1 | Y14572 | Solanum tuberosum | CAA98169.1 | Z73941 | Lotus japonicus |
| AAG25725.1 | AF309806 | Populus balsamifera subsp. | CAA89021.1 | Z49152 | Beta vulgaris |
| trichocarpa | | | AAB97114.1 | U58853 | Glycine max |
| CAA05293.1 | AJ002281 | Lycopersicon esculentum | CAA98179.1 | Z73951 | Lotus japonicus |
| AAB24397.1 | S51538 | Solanum tuberosum | AAD28731.1 | AF112964 | Triticum aestivum |
| AAD50631.1 | AF122901 | Lycopersicon esculentum | CAA04701.1 | AJ001367 | Daucus carota |
| CAA40795.2 | X57563 | Oryza sativa subsp. indica | BAA02112.1 | D12544 | Pisum sativum |
| AAG25726.1 | AF309807 | Populus balsamifera subsp. | CAC19792.1 | AJ292320 | Oryza sativa |
| trichocarpa | | | CAA98170.1 | Z73942 | Lotus japonicus |
| SEQ ID NO. 418 | | | AAB71504.1 | U82219 | Prunus armeniaca |
| AAF78018.1 | AF238474 | Oryza sativa | BAA02110.1 | D12542 | Pisum sativum |
| AAD46917.1 | AF164021 | Oryza sativa | CAA98171.1 | Z73943 | Lotus japonicus |
| AAF78044.1 | AF248493 | Oryza sativa | CAA46600.1 | X65650 | Pisum sativum |
| AAC27489.1 | AF077130 | Oryza sativa | CAA46112.1 | X64941 | Nicotiana plumbaginifolia |
| AAC02535.1 | AF044260 | Oryza sativa | CAA90082.1 | Z49902 | Pisum sativum |
| AAC49629.1 | U51330 | Triticum aestivum | BAA02113.1 | D12545 | Pisum sativum |
| AAF68398.1 | AF237568 | Oryza sativa | CAC24477.1 | AJ296336 | Cichorium intybus x Cichorium |
| | | | endivia | | |

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| CAA98175.1 | 273947 | Lotus japonicus | CAA53694.1 | U59379 | Brassica napus |
| SEQ ID NO. 421 | | | AAD49231.1 | AF159386 | Secale cereale |
| AAD04034.1 | AF081794 | Nicotiana tabacum | BAB39913.1 | AP002912 | Oryza sativa |
| AAD20458.1 | AF099969 | Nicotiana tabacum | AAD56954.1 | AF186240 | Secale cereale |
| SEQ ID NO. 422 | | | CAA55398.1 | X78821 | Chlamydomonas reinhardtii |
| BAA19928.1 | AB003491 | Oryza sativa | CAA44209.1 | X62335 | Chlamydomonas reinhardtii |
| AAA33491.1 | M76685 | Zea mays | CAA56851.1 | X80888 | Chlamydomonas reinhardtii |
| AAB97526.1 | AF042321 | Camptotheca acuminata | AAD45358.1 | AF160870 | Brassica napus |
| AAB97087.1 | AF042320 | Camptotheca acuminata | AAB52409.1 | U76831 | Brassica napus |
| AAA33490.1 | M76684 | Zea mays | CAA06736.1 | AJ005841 | Oryza sativa |
| AAC25986.1 | AF047024 | Chlamydomonas reinhardtii | CAA06735.1 | AJ005840 | Triticum aestivum |
| SEQ ID NO. 423 | | | CAA53900.1 | X76269 | Pisum sativum |
| AAC04671.1 | AF018174 | Brassica napus | AAC49358.1 | U35831 | Pisum sativum |
| CAA45098.1 | X63537 | Pisum sativum | CAA35826.1 | X51462 | Spinacia oleracea |
| AAC49357.1 | U35830 | Pisum sativum | CAA35827.1 | X51463 | Spinacia oleracea |
| AAC19392.1 | AF069314 | Mesembryanthemum crystallinum | SEQ ID NO. 425 | | |
| CAA33082.1 | X14959 | Spinacia oleracea | AAD16139.1 | AF096299 | Nicotiana tabacum |
| BAB20886.1 | AB053294 | Oryza sativa | AAC37515.1 | L44134 | Cucumis sativus |
| AAC32111.1 | AF051206 | Picea mariana | AAF23898.1 | AF193802 | Oryza sativa |
| AAB53695.1 | U59380 | Brassica napus | BAA82107.1 | AB022693 | Nicotiana tabacum |
| CAA05081.1 | AJ001903 | Triticum turgidum subsp. durum | BAA77383.1 | AB020590 | Nicotiana tabacum |
| CAA77847.1 | Z11803 | Nicotiana tabacum | AAD55974.1 | AF121353 | Petroselinum crispum |
| BAA13524.1 | D87984 | Fagopyrum esculentum | CAA88326.1 | Z48429 | Avena fatua |
| BAA04864.1 | D21836 | Oryza sativa | AAC31956.1 | AF080595 | Pimpinella brachycarpa |
| AAB51522.1 | U92541 | Oryza sativa | AAC49527.1 | U48831 | Petroselinum crispum |
| BAA05546.1 | D26547 | Oryza sativa | BAA86031.1 | AB026890 | Nicotiana tabacum |
| AAF88067.1 | AF286593 | Triticum aestivum | AAD16138.1 | AF096298 | Nicotiana tabacum |
| CAA41415.1 | X58527 | Nicotiana tabacum | AAC49529.1 | U58540 | Petroselinum crispum |
| CAA94534.1 | Z70677 | Ricinus communis | AAG35658.1 | AF204925 | Petroselinum crispum |
| AAD49232.1 | AF159387 | Lolium perenne | BAB16432.1 | AB041520 | Nicotiana tabacum |
| AAD49234.1 | AF159389 | Phalaris coerulescens | CAA88331.1 | Z48431 | Avena fatua |
| AAD49233.1 | AF159388 | Phalaris coerulescens | BAA77358.1 | AB020023 | Nicotiana tabacum |
| AAD49230.1 | AF159385 | Hordeum bulbosum | AAC49528.1 | U56834 | Petroselinum crispum |
| BAA25681.1 | AB010434 | Brassica rapa | AAG35659.1 | AF204926 | Petroselinum crispum |
| CAA55399.1 | X78822 | Chlamydomonas reinhardtii | CAB66338.1 | AJ279697 | Betula pendula |
| CAA56850.1 | X80887 | Chlamydomonas reinhardtii | AAD27591.1 | AF121354 | Petroselinum crispum |
| AAG35777.1 | AF273844 | Brassica oleracea var. alboglabra | AAF61864.1 | AF193771 | Nicotiana tabacum |
| | | | AAF61863.1 | AF193770 | Nicotiana tabacum |
| | | | SEQ ID NO. 433 | | |

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| CAA59800.1 | X85805 | Zea mays | AAAD20330.1 | AF110268 | Oryza sativa |
| AAB60276.1 | U09989 | Zea mays | CAB85496.1 | AJ132894 | Medicago truncatula |
| AA046188.1 | AF156691 | Nicotiana plumbaginifolia | CAC28223.1 | AJ286748 | Sesbania rostrata |
| BAA08134.1 | D45189 | Zostera marina | CAC28222.1 | AJ286747 | Sesbania rostrata |
| BAA01058.1 | D10207 | Oryza sativa | CAB85497.1 | AJ132893 | Medicago truncatula |
| AAB17186.1 | U72148 | Lycopersicon esculentum | AAB84204.1 | AF029258 | Kosteletzkya virginica |
| CAA54045.1 | X76535 | Solanum tuberosum | CAC28220.1 | AJ286745 | Sesbania rostrata |
| CAA47275.1 | X66737 | Nicotiana plumbaginifolia | SEQ ID NO. 434 | | |
| AAB84202.2 | AF029256 | Kosteletzkya virginica | AAF13731.1 | AF002248 | Pisum sativum |
| CAB69823.1 | AJ271438 | Prunus persica | CAA78932.1 | Z17226 | Pinus sylvestris |
| BAA37150.1 | AB022442 | Vicia faba | CAA78901.1 | Z16409 | Pinus sylvestris |
| CAA59799.1 | X85804 | Phaseolus vulgaris | CAA57877.1 | X82497 | Nicotiana tabacum |
| CAC29436.1 | AJ310524 | Vicia faba | AAF90200.1 | AF287276 | Hordeum vulgare |
| AAB41898.1 | U84891 | Mesembryanthemum crystallinum | AAC67557.1 | AF094775 | Oryza sativa |
| AAB35314.2 | S79323 | Vicia faba | CAA32197.1 | X14036 | Lycopersicon esculentum |
| AAD46186.1 | AF156679 | Nicotiana plumbaginifolia | AAA34159.1 | M20241 | Lycopersicon esculentum |
| CAB69824.1 | AJ271439 | Prunus persica | AAA33711.1 | M21317 | Petunia x hybrida |
| AAA34052.1 | M27888 | Nicotiana plumbaginifolia | CAA57492.1 | X81962 | Pisum sativum |
| AAF98344.1 | AF275745 | Lycopersicon esculentum | CAA41406.1 | X58516 | Pinus sylvestris |
| AAD55399.1 | AF179442 | Lycopersicon esculentum | CAA59049.1 | X84308 | Hordeum vulgare |
| AAA34094.1 | M80489 | Nicotiana plumbaginifolia | AAB55793.1 | AF010321 | Oryza sativa |
| CAA54046.1 | X76536 | Solanum tuberosum | AAD55568.1 | AF110786 | Volvox carteri f. nagariensis |
| AAA34173.1 | M60166 | Lycopersicon esculentum | CAA41407.1 | X58517 | Pinus sylvestris |
| AAA34098.1 | M80490 | Nicotiana plumbaginifolia | CAA33330.1 | X15258 | Lycopersicon esculentum |
| CAC29435.1 | AJ310523 | Vicia faba | CAA50763.1 | X71965 | Pyrobotrys stellata |
| BAA06629.1 | D31843 | Oryza sativa | AA04545.1 | L19651 | Chloroplast-Pisum sativum |
| CAB85495.1 | AJ132892 | Medicago truncatula | AAF44703.1 | AF241525 | Alonsoa meridionalis |
| CAB85494.1 | AJ132891 | Medicago truncatula | CAA45523.1 | X64198 | Nicotiana tabacum |
| AAD46187.1 | AF156683 | Nicotiana plumbaginifolia | AAD55569.1 | AF110787 | Volvox carteri f. nagariensis |
| AAK31799.1 | AY029190 | Lilium longiflorum | AAA34140.1 | M17633 | Lycopersicon esculentum |
| AAA34099.1 | M80491 | Nicotiana plumbaginifolia | AAC67558.1 | AF094776 | Oryza sativa |
| CAA52107.1 | X73901 | Dunaliella bioculata | AAF23819.1 | AF218305 | Hordeum vulgare |
| AAB49042.1 | U54690 | Dunaliella acidophila | CAA46235.1 | X65119 | Chlamydomonas reinhardtii |
| AAG01028.1 | AF289025 | Cucumis sativus | AAD03734.1 | AF104633 | Chlamydomonas reinhardtii |
| AA081348.1 | U38965 | Vicia faba | AAD03733.1 | AF104632 | Chlamydomonas reinhardtii |
| AAA34096.1 | M80492 | Nicotiana plumbaginifolia | AAA34186.1 | J03558 | Lycopersicon esculentum |
| AAA20600.1 | U08984 | Zea mays | AAG28464.1 | AF195794 | Chlamydomonas reinhardtii |
| AAA20601.1 | U08985 | Zea mays | CAA41404.1 | X58514 | Pinus sylvestris |
| AAK32118.1 | AF308816 | Hordeum vulgare | CAA41405.1 | X58515 | Pinus sylvestris |
| CAC10554.1 | AJ295612 | Hordeum vulgare | CAA78900.1 | Z16408 | Pinus sylvestris |
| AAF97591.1 | AF263917 | Lycopersicon esculentum | | | |

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| AAF44702.1 | AF241524 | Asarina barclaiana | AAF35186.1 | AF195865 | Gossypium hirsutum |
| CXA44777.1 | X63052 | Hordeum vulgare | CXA48623.1 | X68656 | Hordeum vulgare |
| CXA39883.1 | X56538 | Pisum sativum | AA866694.1 | U18127 | Hordeum vulgare |
| CXA31232.1 | X12735 | Hordeum vulgare | AAF35185.1 | AF195864 | Gossypium hirsutum |
| AAA33651.1 | K02067 | Pisum sativum | AAF35184.1 | AF195863 | Gossypium hirsutum |
| CXA10284.1 | AJ131044 | Cicer arietinum | AAK20395.1 | AF334185 | Triticum aestivum |
| AAA33396.1 | M29334 | Lemna gibba | AAF23459.1 | AF208833 | Capsicum annuum |
| CXA74179.1 | Y13865 | Beta vulgaris | AAF26451.1 | AF221503 | Pyrus communis |
| AAF89207.1 | AF279250 | Vigna radiata | AAF14232.1 | AF109195 | Hordeum vulgare |
| AAA64414.1 | U23188 | Zea mays | CAA80809.1 | Z23271 | Oryza sativa |
| AAA64415.1 | U23189 | Zea mays | AA806443.1 | U66105 | Zea mays |
| CXA39376.1 | X55892 | Zea mays | AA75599.1 | U15153 | Gossypium hirsutum |
| CXA26211.1 | X02358 | Petunia sp. | AA34774.1 | S78173 | Gossypium hirsutum |
| | | | AA333493.1 | J04176 | Zea mays |
| SEQ ID NO. 436 | | | AAF26450.1 | AF221502 | Malus x domestica |
| AA10836.1 | U52079 | Solanum tuberosum | AAF23460.1 | AF208834 | Capsicum annuum |
| BAA83352.1 | AP000391 | Oryza sativa | CAA50661.1 | X71668 | Sorghum bicolor |
| BAA90508.1 | AP001111 | Oryza sativa | CAA50660.1 | X71667 | Sorghum bicolor |
| BAA90507.1 | AP001111 | Oryza sativa | CAA05771.1 | AJ002958 | Cicer arietinum |
| | | | CAA63407.1 | X92748 | Beta vulgaris |
| SEQ ID NO. 438 | | | CA896874.1 | AJ277164 | Malus x domestica |
| CAA81057.1 | Z25802 | Petunia x hybrida | AAA34032.1 | M58635 | Spinacia oleracea |
| CAA50377.1 | X71060 | Petunia x hybrida | AA09107.1 | AF101038 | Brassica napus |
| CAA50376.1 | X71059 | Petunia x hybrida | CAA65477.1 | X96716 | Prunus dulcis |
| BAA89008.1 | AB027454 | Petunia x hybrida | CAA48622.1 | X68655 | Hordeum vulgare |
| | | | CAA85483.1 | Z37114 | Hordeum vulgare |
| SEQ ID NO. 439 | | | AA880805.1 | U90342 | Pinus radiata |
| AAF28385.1 | AF151214 | Nicotiana glauca | AA818815.1 | U77295 | Oryza sativa |
| AAA74624.1 | U31766 | Oryza sativa | CAA65475.1 | X96714 | Prunus dulcis |
| AAG29777.1 | AF228333 | Gossypium hirsutum | CAA69949.1 | Y08691 | Oryza sativa |
| AA870539.1 | AF017359 | Oryza sativa | AAK28533.1 | AF329829 | Corylus avellana |
| AA870538.1 | AF017358 | Oryza sativa | AA896834.1 | M64746 | Daucus carota |
| AAC00499.1 | AF044204 | Gossypium hirsutum | AAF26449.1 | AF221501 | Prunus avium |
| AAF71695.1 | AF198168 | Aerides japonica | CAA45210.1 | X63669 | Triticum turgidum subsp. durum |
| CXA48621.1 | X68654 | Hordeum vulgare | | | |
| CAA91436.1 | Z66529 | Hordeum vulgare | | | |
| AA805812.1 | U63993 | Hordeum vulgare | | | |
| CAA91435.1 | Z66528 | Hordeum vulgare | | | |
| AAK01293.1 | AF331710 | Avicennia marina | | | |
| AAG27707.1 | AF302788 | Triticum aestivum | | | |
| CAA85484.1 | Z37115 | Hordeum vulgare | | | |
| | | | SEQ ID NO. 445 | | |
| | | | AA898091.1 | AF067401 | Oryza sativa |
| | | | BAB39155.1 | AB048713 | Pisum sativum |
| | | | AAG13663.1 | AF263457 | Zea mays |
| | | | BAA90816.1 | AF001168 | Oryza sativa |
| | | | AA898090.1 | AF067400 | Zea mays |

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| CAB07803.1 | Z93768 | Nicotiana tabacum | BAA92337.1 | AB038790 | Vicia faba |
| CAA05491.1 | AJ002485 | Medicago sativa | BAA92336.1 | AB038789 | Vicia faba |
| BAA92244.1 | AB038648 | Vicia faba | SEQ ID NO. 493 | | |
| CAA07470.1 | AJ007332 | Catharanthus roseus | AAD51109.1 | AF176040 | Mesembryanthemum crystalli |
| CAA05492.1 | AJ002486 | Medicago sativa | CAA51821.1 | X73419 | Lycopersicon esculentum |
| CAA05494.1 | AJ002488 | Medicago sativa | AAA64427.1 | I29077 | Pisum sativum |
| AAA33545.1 | M60215 | Zea mays | AAA34125.1 | I23762 | Lycopersicon esculentum |
| CAA82263.1 | Z28627 | Acetabularia cliftonii | AAB88617.1 | AF034946 | Zea mays |
| CAA82264.1 | Z28632 | Acetabularia cliftonii | AAB02168.1 | U15971 | Oryza sativa |
| CAA56766.1 | X80788 | Medicago sativa subsp. x varia | AAA86089.1 | U17250 | Brassica oleracea |
| AAD38856.1 | AF156101 | Chlamydomonas reinhardtii | BAA21006.1 | D17786 | Oryza sativa |
| CAA05493.1 | AJ002487 | Medicago sativa | AAD42941.1 | AF091621 | Catharanthus roseus |
| CAB07805.1 | Z93770 | Nicotiana tabacum | BAB40310.1 | AB026055 | Nicotiana tabacum |
| CAA88254.1 | Z48221 | Phaseolus vulgaris | BAB40311.1 | AB026056 | Nicotiana tabacum |
| CAA40686.1 | X57438 | Brassica napus | AAA34310.1 | M62720 | Triticum aestivum |
| AAD41126.1 | AF159061 | Oryza sativa subsp. indica | AAF73016.1 | AF262934 | Avicennia marina |
| CAB46506.1 | AJ007496 | Nicotiana tabacum | CAA58111.1 | X82938 | Lycopersicon esculentum |
| AAD22116.1 | AF134552 | Oryza sativa subsp. indica | CAA06493.1 | AJ005348 | Cicer arietinum |
| BAA92699.1 | AB039918 | Vicia faba | BAA90392.1 | AP001081 | Oryza sativa |
| CAA49849.1 | X70399 | Medicago sativa | AAC12662.1 | AF032468 | Zea mays |
| AAD48068.1 | AF173881 | Oryza sativa subsp. indica | CAA05772.1 | AJ002959 | Zea mays |
| CAA81395.1 | Z26654 | Acetabularia cliftonii | AAF22280.1 | AF165420 | Mesembryanthemum crystallinum |
| CAB07807.1 | Z93772 | Nicotiana tabacum | AAB63513.1 | AF008910 | Prunus armeniaca |
| CAA40687.1 | X57439 | Brassica napus | AAF03236.1 | AF180143 | Glycine max |
| CAA07471.1 | AJ007333 | Catharanthus roseus | AAA34309.1 | M28059 | Triticum aestivum |
| BAA92698.1 | AB039917 | Vicia faba | CAA10494.1 | AJ131733 | Pseudotsuga menziesii |
| BAA92697.1 | AB039916 | Vicia faba | AAC32141.1 | AF051240 | Picea mariana |
| AAF86353.1 | AF283668 | Oryza sativa subsp. indica | SEQ ID NO. 495 | | |
| CAA81126.1 | Z26041 | Helianthus annuus | BAA05965.1 | D28777 | Citrullus lanatus |
| AAC72838.1 | AF097182 | Oryza sativa | BAB20861.1 | AB029511 | Solanum tuberosum |
| CAC11129.1 | AJ298829 | Fagus sylvatica | AAC25635.1 | AF044172 | Solanum tuberosum |
| AAA91806.1 | U49113 | Oryza sativa | AAD23909.1 | AF073697 | Oryza sativa |
| AAD09953.1 | AF107464 | Hevea brasiliensis | AAD23907.1 | AF073695 | Oryza sativa |
| CAA87385.1 | Z47076 | Malus x domestica | CAA59798.1 | X85803 | Zea mays |
| CAB07806.1 | Z93771 | Nicotiana tabacum | BAB20862.1 | AB029512 | Solanum tuberosum |
| CAC11128.1 | AJ298828 | Fagus sylvatica | AAC25636.1 | AF044173 | Solanum tuberosum |
| CAA87387.1 | Z47078 | Malus x domestica | BAA03542.1 | D14722 | Spinacia oleracea |
| BAA92333.1 | AB038786 | Vicia faba | CAA47329.1 | X66860 | Spinacia oleracea |
| CAA87386.1 | Z47077 | Malus x domestica | CAC12819.1 | AJ299249 | Nicotiana tabacum |
| BAA92338.1 | AB038791 | Vicia faba | | | |
| BAA92334.1 | AB038787 | Vicia faba | | | |

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| BAA93051.1 | AB040503 | Allium tuberosum | AAG34816.1 | AF244673 | Zea mays |
| BAB20863.1 | AB029513 | Solanum tuberosum | CRA05354.1 | AJ002380 | Oryza sativa |
| CAA06819.1 | AJ006024 | Cicer arietinum | AAG34824.1 | AF244681 | Zea mays |
| CAC09469.1 | AL442113 | Oryza sativa | CAA05355.1 | AJ002381 | Oryza sativa |
| BAA07177.1 | D37963 | Spinacia oleracea | SEQ ID NO. 498 | | |
| AAD23908.1 | AF073696 | Oryza sativa | AAB05871.2 | U63784 | Catharanthus roseus |
| AAD23910.1 | AF073698 | Oryza sativa | CAB65911.1 | AJ249831 | Lemna minor |
| AAF78529.1 | AF195239 | Pyrus pyrifolia | AAF18999.1 | AF212155 | Allium cepa |
| SEQ ID NO. 497 | | | AAC26855.1 | AF069951 | Enteromorpha intestinalis |
| AAG34812.1 | AF243377 | Glycine max | SEQ ID NO. 499 | | |
| AAG34814.1 | AF243379 | Glycine max | AAC62017.1 | AF077547 | Brassica juncea |
| CAA68993.1 | Y07721 | Petunia x hybrida | AAF26434.1 | AF220097 | Brassica juncea |
| CAB38119.1 | AJ010296 | Zea mays | AAF26435.1 | AF220098 | Brassica juncea |
| CAA09190.1 | AJ010451 | Alopecurus myosuroides | AAB60880.1 | AF002017 | Dianthus caryophyllus |
| CAA09192.1 | AJ010453 | Alopecurus myosuroides | AAF42972.1 | AF127241 | Nicotiana tabacum |
| CAA09191.1 | AJ010452 | Alopecurus myosuroides | BAA25685.1 | AB012873 | Nicotiana sylvestris |
| CAB38118.1 | AJ010295 | Zea mays | CAA85773.1 | Z37540 | Pisum sativum |
| CAA09193.1 | AJ010454 | Alopecurus myosuroides | CAB64599.1 | AJ251898 | Datura stramonium |
| AAG34811.1 | AF243376 | Glycine max | AAD09204.1 | U35367 | Glycine max |
| CAA55039.1 | X78203 | Hyoscyamus muticus | BAA84799.1 | AP000559 | Oryza sativa |
| AAA20585.1 | U12679 | Zea mays | AAB67887.1 | U63832 | Dianthus caryophyllus |
| AAA33930.1 | M84968 | Silene vulgaris | AAF42971.1 | AF127240 | Nicotiana tabacum |
| CAA56047.1 | X79515 | Zea mays | AAF42970.1 | AF127239 | Nicotiana tabacum |
| AAA33931.1 | M84969 | Silene vulgaris | AAC68511.1 | AF045666 | Theobroma cacao |
| AAB65163.1 | AF002692 | Solanum commersonii | CAA65585.1 | X96791 | Vitis vinifera |
| BAA01394.1 | D10524 | Nicotiana tabacum | AAA61347.1 | L16582 | Lycopersicon esculentum |
| AAG34823.1 | AF244680 | Zea mays | AAC68530.1 | AF045685 | Arabidopsis arenosa |
| AAC64007.1 | AF062403 | Oryza sativa | AAC68529.1 | AF045684 | Capsella bursa-pastoris |
| CAA96431.1 | Z71749 | Nicotiana plumbaginifolia | AAC68525.1 | AF045680 | Arabis drummondii |
| AAA33470.1 | M16901 | Zea mays | AAC68526.1 | AF045681 | Barbarea vulgaris |
| AAA33469.1 | M16902 | Zea mays | AAC68535.1 | AF045690 | Nasturtium officinale |
| CAA39487.1 | X56012 | Triticum aestivum | AAC68534.1 | AF045689 | Theilungiaella salsuginea |
| AAG34817.1 | AF244674 | Zea mays | AAC68533.1 | AF045688 | Thlaspi arvense |
| AAG34822.1 | AF244679 | Zea mays | AAC68532.1 | AF045687 | Stanleya pinnata |
| AAD56395.1 | AF184059 | Triticum aestivum | AAC68531.1 | AF045686 | Sisymbrium altissimum |
| AAG34820.1 | AF244677 | Zea mays | AAC68510.1 | AF045665 | Aethionema grandiflora |
| CAA39480.1 | X56004 | Triticum aestivum | AAC68528.1 | AF045683 | Brassica oleracea |
| AAF61392.1 | AF133894 | Persea americana | AAC68519.1 | AF045674 | Arabidopsis arenosa |
| AAG34821.1 | AF244678 | Zea mays | AAC68527.1 | AF045682 | Brassica nigra |
| AAG34818.1 | AF244675 | Zea mays | | | |

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| AAC68523.1 | AF045678 | Thellungiella salsuginea | AAF75791.1 | AF271892 | Pisum sativum |
| AAC68514.1 | AF045669 | Arabis drummondii | AAF40306.1 | AF156667 | Vigna radiata |
| AAC68524.1 | AF045679 | Nasturtium officinale | CAA68193.1 | X99937 | Spinacia oleracea |
| AAC68522.1 | AF045677 | Thlaspi arvense | BAA95704.1 | AB042643 | Oryza sativa |
| AAC68513.1 | AF045668 | Polanisia dodecandra | BAA95705.1 | AB042644 | Oryza sativa |
| AAC68518.1 | AF045673 | Capsella bursa-pastoris | AAD20980.1 | AF079782 | Zea mays |
| AAC68515.1 | AF045670 | Barbarea vulgaris | SEQ ID NO. 532 | | |
| AAC68521.1 | AF045676 | Stanleya pinnata | BAA95893.1 | AP002071 | Oryza sativa |
| AAC68520.1 | AF045675 | Sisymbrium altissimum | AAB09771.1 | U67422 | Zea mays |
| AAC68517.1 | AF045672 | Brassica oleracea | AAG25966.1 | AF302082 | Nicotiana tabacum |
| AAC68516.1 | AF045671 | Brassica nigra | BAA78764.1 | AB023482 | Oryza sativa |
| AAC68512.1 | AF045667 | Carica papaya | AAK21965.1 | AY028699 | Brassica napus |
| CAA40137.1 | X56802 | Avena sativa | AAF91323.1 | AF244889 | Glycine max |
| AAD24801.1 | AF132498 | Brassica napus | AAF91324.1 | AF244890 | Glycine max |
| BAA21617.1 | AB005880 | Nicotiana tabacum | CAB51834.1 | 00069 | Oryza sativa |
| AAB82607.1 | AF026809 | Ipomoea nil | CAC20842.1 | AJ250467 | Pinus sylvestris |
| SEQ ID NO. 501 | | | BAA06538.1 | D31737 | Nicotiana tabacum |
| CAA52201.1 | X74072 | Lycopersicon esculentum | AAG00510.1 | AF285172 | Phaseolus vulgaris |
| SEQ ID NO. 513 | | | AAC27894.1 | AF023164 | Zea mays |
| AAB36543.1 | U77935 | Phaseolus vulgaris | AAF91322.1 | AF244888 | Glycine max |
| SEQ ID NO. 514 | | | AAG16628.1 | AY007545 | Brassica napus |
| CAA32121.1 | X13934 | Lycopersicon esculentum | AAF59906.1 | AF197947 | Glycine max |
| CAA90564.1 | Z50185 | Populus nigra | AAF43496.1 | AF131222 | Lophopyrum elongatum |
| CAA28398.1 | X04693 | Spinacia oleracea | BAA84787.1 | AP000559 | Oryza sativa |
| CAA90565.1 | Z50186 | Populus nigra | BAA83373.1 | AP000391 | Oryza sativa |
| AAB86855.1 | AF031545 | Fritillaria agrestis | AAK11674.1 | AF339747 | Lophopyrum elongatum |
| AAC78108.1 | AF093636 | Oryza sativa | AAC27895.1 | AF023165 | Zea mays |
| AAB63590.1 | AF009412 | Oryza sativa | BAA94509.1 | AB041503 | Populus nigra |
| CAA82201.1 | Z28347 | Hordeum vulgare | BAA94510.1 | AB041504 | Populus nigra |
| CAA68696.1 | Y00704 | Hordeum vulgare | AAB61708.1 | U93048 | Daucus carota |
| BAA77274.1 | AB026687 | Physcomitrella patens | AAC36318.1 | AF053127 | Malus x domestica |
| AAA33089.1 | L07282 | Chlamydomonas reinhardtii | AAF76313.1 | AF220603 | Lycopersicon esculentum |
| AAA33078.1 | J05524 | Chlamydomonas reinhardtii | AAB47421.1 | U59316 | Lycopersicon esculentum |
| AAD03610.1 | AF114235 | Scenedesmus obliquus | AAK11569.1 | AF318493 | Lycopersicon hirsutum |
| BAA84778.1 | AB017810 | Pediastrum boryanum | AAF59905.1 | AF197946 | Glycine max |
| SEQ ID NO. 521 | | | SEQ ID NO. 538 | | |
| BAA03763.1 | D16247 | Nicotiana sylvestris | ARD39440.1 | AF132002 | Petunia x hybrida |
| | | | AAD39439.1 | AF132001 | Petunia x hybrida |
| | | | AAG32659.1 | AF253971 | Picea abies |

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| AAG32658.1 | AF253970 | Picea abies | AAA34292.1 | M12277 | Triticum aestivum |
| AAD22495.3 | AF134116 | Hyacinthus orientalis | AAA98456.1 | U16825 | Chlamydomonas reinhardtii |
| CAC12822.1 | AJ299252 | Nicotiana tabacum | AAA98449.1 | U16725 | Chlamydomonas reinhardtii |
| BAB03248.1 | AB037183 | Oryza sativa | AAA98445.1 | U16724 | Chlamydomonas reinhardtii |
| BAB16083.1 | AB036883 | Oryza sativa | CAA59110.1 | X84376 | Zea mays |
| AAC24587.1 | AF071893 | Prunus armeniaca | CAA30036.1 | X06964 | Volvox carteri |
| AAF63205.1 | AF245119 | Mesembryanthemum crystallinum | CAA30034.1 | X06963 | Volvox carteri |
| BAA78738.1 | AB023482 | Oryza sativa | CAA64985.1 | X95689 | Allium cepa |
| AAF76898.1 | AF274033 | Atriplex hortensis | SEQ ID NO. 550 | | |
| AAG43545.1 | AF211527 | Nicotiana tabacum | AAD46491.1 | AF135014 | Zea mays |
| AAG43549.1 | AF211531 | Nicotiana tabacum | BAA90623.1 | AP001129 | Oryza sativa |
| AAG43548.1 | AF211530 | Nicotiana tabacum | BAA77024.1 | AB026124 | Lithospermum erythrorhizon |
| SEQ ID NO. 539 | | | SEQ ID NO. 551 | | |
| BAA09645.1 | D63331 | Nicotiana tabacum | AAC31886.1 | AF059484 | Gossypium hirsutum |
| BAA11770.1 | D83078 | Nicotiana tabacum | AAC49651.1 | U68461 | Striga asiatica |
| BAA77679.1 | AB027054 | Oryza sativa | CAA39280.1 | X55751 | Solanum tuberosum |
| SEQ ID NO. 541 | | | AAC49652.1 | U68462 | Striga asiatica |
| CAB56756.1 | AJ011589 | Pisum sativum | AAF03692.1 | AF172094 | Picea rubens |
| AAD01907.1 | AF030516 | Pisum sativum | AAF71264.1 | AF246714 | Phalaenopsis sp. 'True Lady' |
| AAG48834.1 | AC084218 | Oryza sativa | AAG10041.1 | AF288226 | Setaria italica |
| SEQ ID NO. 542 | | | AAD41039.1 | AF112538 | Malva pusilla |
| AAD29703.1 | AF140490 | Oryza sativa | CAA45149.1 | X63603 | Nicotiana tabacum |
| SEQ ID NO. 545 | | | AAF31643.1 | AF143208 | Vigna radiata |
| CAR24924.1 | X00043 | Triticum aestivum | BAA89214.1 | AB032361 | Mimosa pudica |
| CAB01914.1 | Z79638 | Sesbania rostrata | CAA39278.1 | X55749 | Solanum tuberosum |
| AAA86948.1 | U10042 | Pisum sativum | AAD03741.1 | AF111812 | Brassica napus |
| AAA33476.1 | M13377 | Zea mays | AAF71265.1 | AF246715 | Phalaenopsis sp. 'True Lady' |
| AAA33475.1 | M13370 | Zea mays | CAA39281.1 | X55752 | Solanum tuberosum |
| AAA33474.1 | M36659 | Zea mays | AB38512.1 | U81047 | Pisum sativum |
| CAC34411.1 | Y18575 | Flaveria trinervia | AB38511.1 | U81046 | Pisum sativum |
| AAG46106.1 | AC073166 | Oryza sativa | AB18642.1 | U76191 | Pisum sativum |
| BAA85120.1 | AB018245 | Solanum melongena | AB18641.1 | U76190 | Pisum sativum |
| CAB01913.1 | Z79637 | Sesbania rostrata | CAA62028.1 | X90378 | Pisum sativum |
| CAA48924.1 | X69180 | Lycopersicon esculentum | CAA47899.1 | X67666 | Pisum sativum |
| CAA48923.1 | X69179 | Lycopersicon esculentum | CAA33874.1 | X15865 | Oryza sativa |
| AAB94924.1 | AF0368387 | Capsicum annuum | AAF82805.1 | AF282624 | Helianthus annuus |
| CAA56154.1 | X79715 | Lolium temulentum | CAA48609.1 | X68649 | Pisum sativum |
| | | | AAC64127.1 | AF091809 | Anemia phyllitidis |
| | | | AAF40438.1 | AF234528 | Avena nuda |

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| CAA39279.1 | X55750 | Solanum tuberosum | BAA96628.1 | AP002482 | Oryza sativa |
| CAA55923.1 | X79378 | Sorghum bicolor | BAA05649.1 | D26602 | Nicotiana tabacum |
| CAA34356.1 | X16280 | Oryza sativa | CAA57898.1 | X82548 | Hordeum vulgare |
| AAC16054.1 | AF061019 | Coleochaete scutata | AAC99329.1 | AF062479 | Oryza sativa |
| AAB38514.1 | U81049 | Pisum sativum | CAA65244.1 | X95997 | Solanum tuberosum |
| AAB18644.1 | U76193 | Pisum sativum | AAD23582.1 | AF128443 | Glycine max |
| CAA33873.1 | X15864 | Oryza sativa | AAF19402.1 | AF203480 | Lycopersicon esculentum |
| AAC64128.1 | AF091810 | Anemia phyllitidis | AAF19403.1 | AF203481 | Lycopersicon esculentum |
| AAD02328.1 | AF044573 | Brassica oleracea | CAA46556.1 | X65606 | Hordeum vulgare |
| AAC05272.1 | AF049106 | Glycine max | CAA07813.1 | AJ007990 | Hordeum vulgare |
| AAC16055.1 | AF061020 | Mesostigma viride | AAF19401.1 | AF203479 | Glycine max |
| AAF87302.1 | AF281323 | Magnolia denudata | BAA83688.1 | AB011967 | Oryza sativa |
| BAA09450.1 | D50839 | Chlamydomonas reinhardtii | AAB05457.1 | U55768 | Oryza sativa |
| BAA09449.1 | D50838 | Chlamydomonas reinhardtii | AAD17800.1 | AF090835 | Mesembryanthemum crystalli |
| AAA34243.1 | M33963 | Volvox carteri | AAD28791.1 | AF145593 | Nicotiana tabacum |
| AAC16053.1 | AF061018 | Scherffelia dubia | AAD52098.1 | U70923 | Nicotiana tabacum |
| AAA33433.1 | J01238 | Zea mays | CAA82993.1 | Z30332 | Spinacia oleracea |
| AAC64126.1 | AF091808 | Anemia phyllitidis | CAA46554.1 | X65604 | Hordeum vulgare |
| CAA33871.1 | X15862 | Oryza sativa | BAA34675.1 | AB011670 | Triticum aestivum |
| AAA33940.1 | J01297 | Glycine max | SEQ ID NO. 554 | | |
| BAA25911.1 | AB013098 | Nannochloris bacillaris | AAF69017.1 | AF261654 | Dianthus caryophyllus |
| AAD48335.1 | AF090969 | Selaginella apoda | CAC09582.1 | AJ298994 | Fagus sylvatica |
| AAD48334.1 | AF090968 | Selaginella apoda | AAG00419.1 | AF247568 | Nicotiana tabacum |
| CAA39276.1 | X55746 | Solanum tuberosum | SEQ ID NO. 555 | | |
| SEQ ID NO. 553 | | | AAF20002.1 | AF213936 | Prunus dulcis |
| AAF67262.1 | AF165186 | Nicotiana tabacum | AAC32034.1 | AF023472 | Hordeum vulgare |
| CAA04261.2 | AJ000728 | Lycopersicon esculentum | AAD01600.1 | AF016713 | Lycopersicon esculentum |
| AAC83393.1 | U83625 | Zea mays | AAF07875.1 | AF140606 | Oryza sativa |
| BAB32405.1 | AB055514 | Nicotiana tabacum | AAD16016.1 | AF080545 | Nepenthes alata |
| CAC24705.1 | AJ302651 | Nicotiana tabacum | CAC07206.1 | AJ278966 | Brassica napus |
| AAG40578.1 | AF216314 | Oryza sativa | AAB69642.1 | AF000392 | Lotus japonicus |
| BAA06731.1 | D31964 | Nicotiana tabacum | CAA93316.1 | Z69370 | Cucumis sativus |
| AAG53979.1 | AF325168 | Nicotiana tabacum | BAB19760.1 | AB052788 | Glycine max |
| CAA08758.1 | AJ009609 | Brassica napus | BAB19757.1 | AB052785 | Glycine max |
| CAA08757.1 | AJ009608 | Brassica napus | BAB19756.1 | AB052784 | Glycine max |
| BAA05648.1 | D26601 | Nicotiana tabacum | AAD42860.1 | AF154930 | Prunus dulcis |
| AAF34436.1 | AF172282 | Oryza sativa | SEQ ID NO. 556 | | |
| CAA08995.1 | AJ010091 | Brassica napus | BAA20848.1 | AB004932 | Vigna radiata |
| CAA08997.1 | AJ010093 | Brassica napus | | | |
| CAA71142.1 | Y10036 | Cucumis sativus | | | |

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| CAA48297.1 | X68215 | Pisum sativum | CAA65456.2 | X96681 | Oryza sativa |
| CAA48298.1 | X68216 | Pisum sativum | BAA05622.1 | D26573 | Daucus carota |
| BAA20849.1 | AB004933 | Vigna radiata | BAA05625.1 | D26576 | Daucus carota |
| RAA33945.1 | J03919 | Glycine max | BAA21017.1 | D26578 | Daucus carota |
| RAA33944.1 | J03920 | Glycine max | BAA05624.1 | D26575 | Daucus carota |
| BAA20847.1 | AB004931 | Vigna radiata | BAA05623.1 | D26574 | Daucus carota |
| CAA48300.1 | X68218 | Pisum sativum | | | |
| CAA48299.1 | X68217 | Pisum sativum | SEQ ID NO. 563 | | |
| AAD50278.1 | AF169830 | Glycine max | AAA33134.1 | M92660 | Daucus carota |
| | | | AAA50160.1 | L23875 | Lupinus angustifolius |
| | | | AAA33408.1 | M92094 | Lupinus angustifolius |
| | | | AAB46610.1 | L25334 | Medicago sativa |
| | | | CAR43779.1 | X61577 | Medicago sativa |
| | | | AAC50015.1 | AF034210 | Glycine max |
| | | | AAC50014.1 | AF034210 | Glycine max |
| | | | BRA03504.1 | D14673 | Oryza sativa |
| | | | CAR45023.1 | X63429 | Panicum miliaceum |
| | | | BRA04992.1 | D25322 | Panicum miliaceum |
| | | | CAR63894.1 | X94184 | Lotus japonicus |
| | | | ARA33942.1 | L09702 | Glycine max |
| | | | CAR42430.1 | X59761 | Lupinus angustifolius |
| | | | AAC12674.1 | AF029898 | Lotus corniculatus |
| | | | AAB26677.2 | S60967 | Chloroplast Glycine max |
| | | | BAA08106.1 | D45076 | Panicum miliaceum |
| | | | AAB46611.1 | L25335 | Medicago sativa |
| | | | AAB68396.1 | U89494 | Canavalia lineata |
| | | | CAR45022.1 | X63428 | Panicum miliaceum |
| | | | CAR04697.1 | AJ001360 | Plastid Canavalia lineata |
| | | | CAR45024.1 | X63430 | Panicum miliaceum |
| | | | BAA04993.1 | D25323 | Panicum miliaceum |
| | | | AA986603.1 | L40579 | Glycine max |
| | | | BAA23815.1 | D67043 | Oryza sativa |
| | | | BAA23814.1 | D67042 | Oryza sativa |
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| | | | SEQ ID NO. 564 | | |
| | | | AAF37732.1 | AF052221 | Iolium perenne |
| | | | BAA08366.2 | D49367 | Lithospermum erythrorhizon |
| | | | BAA08365.1 | D49366 | Lithospermum erythrorhizon |
| | | | CAC36095.1 | X69955 | Glycine max |
| | | | AAF91308.1 | AF239685 | Rubus idaeus |
| | | | | | |
| | | | SEQ ID NO. 559 | | |
| | | | AAC39333.1 | AF030052 | Oryza sativa subsp. japonica |
| | | | AAD39534.2 | AF150630 | Gossypium hirsutum |
| | | | | | |
| | | | SEQ ID NO. 560 | | |
| | | | AAD01600.1 | AF016713 | Lycopersicon esculentum |
| | | | AAC32034.1 | AF023472 | Hordeum vulgare |
| | | | CAC07206.1 | AJ278966 | Brassica napus |
| | | | AAF20002.1 | AF213936 | Prunus dulcis |
| | | | AAF07875.1 | AF140606 | Oryza sativa |
| | | | CAA93316.1 | Z69370 | Cucumis sativus |
| | | | AAB69642.1 | AF000392 | Lotus japonicus |
| | | | BAB19757.1 | AB052785 | Glycine max |
| | | | BAB19756.1 | AB052784 | Glycine max |
| | | | BAB19760.1 | AB052788 | Glycine max |
| | | | AAD16016.1 | AF080545 | Nepenthes alata |
| | | | AAD42860.1 | AF154930 | Prunus dulcis |

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| AAE91309.1 | AF239686 | Rubus idaeus | AAA64913.1 | U23787 | Sorghum bicolor |
| AAE18638.1 | U50846 | Nicotiana tabacum | AAE74000.2 | AF144507 | Pseudotsuga menziesii |
| BAA07828.1 | D43773 | Nicotiana tabacum | AAE74021.2 | AF144528 | Pseudolarix amabilis |
| AAC39366.1 | AF008184 | Populus x generosa | SEQ ID NO. 565 | | |
| AAC24504.1 | AF041050 | Populus tremuloides | AAC32149.1 | AF051249 | Picea mariana |
| AAG43823.1 | AF212317 | Capsicum annuum | AAE43837.1 | AF166114 | Chloroplast Mesostigma vir |
| AAC24503.1 | AF041049 | Populus tremuloides | AAC72192.1 | AF069908 | Zea mays |
| AAE18637.1 | U50845 | Nicotiana tabacum | AAC72193.1 | AF069909 | Zea mays |
| AAA33842.1 | M62755 | Solanum tuberosum | AAC72194.1 | AF069910 | Zea mays |
| AAD40664.1 | AF150686 | Solanum tuberosum | AAB01223.1 | U56697 | Pisum sativum |
| AAE37733.1 | AF052222 | Lolium perenne | AAD22077.1 | AF124755 | Pinus banksiana |
| AAE37734.1 | AF052223 | Lolium perenne | AAD38941.1 | AF143812 | Lycopersicon esculentum |
| AAE91310.1 | AF239687 | Rubus idaeus | AAD56390.2 | AF182286 | Artemisia annua |
| AAC39365.1 | AF008183 | Populus x generosa | SEQ ID NO. 566 | | |
| CBA31696.1 | X13324 | Petroselinum crispum | BAA02018.1 | D11465 | Spinacia oleracea |
| CBA31697.1 | X13325 | Petroselinum crispum | CBA86071.1 | Z37990 | Pisum sativum |
| CBA36850.1 | X52623 | Oryza sativa | AAE91407.1 | AF271362 | Lolium perenne |
| AAB42382.1 | U39404 | Pinus taeda | AAC25999.1 | AF072289 | Mesembryanthemum crystallinum |
| AAB42383.1 | U39405 | Pinus taeda | AAE65509.1 | AF108881 | Capsicum annuum |
| AAA92669.1 | U12013 | Pinus taeda | AAB67996.1 | U72142 | Helianthus annuus |
| AAA92668.1 | U12012 | Pinus taeda | BAA01510.1 | D10659 | Spinacia oleracea |
| AAD40665.1 | AF150687 | Solanum tuberosum | CBA50511.1 | X71388 | Pisum sativum |
| AAE73997.2 | AF144504 | Picea smithiana | BAA03798.1 | D16292 | Oryza sativa |
| AAE73998.2 | AF144505 | Cathaya argyrophylla | AAE19005.1 | U10283 | Flaveria bidentis |
| AAE73995.2 | AF144502 | Pinus armandii | AAB40609.1 | U55019 | Saccharum officinarum |
| AAE73994.2 | AF144501 | Pinus armandii | AAE19004.1 | U10282 | Flaveria bidentis |
| AAE73996.2 | AF144503 | Pinus armandii | AAE93030.1 | U50150 | Glycine max |
| CBA49575.1 | X69954 | Glycine max | CBA53073.1 | X75324 | Lycopersicon esculentum |
| AAE74019.2 | AF144526 | Tsuga canadensis | AAE93537.1 | AF191098 | Pisum sativum |
| AAE74004.2 | AF144511 | Pseudotsuga sinensis | BAA96460.1 | AB029400 | Brassica rapa |
| AAE74016.2 | AF144523 | Nothotsuga longibracteata | SEQ ID NO. 567 | | |
| AAE74022.2 | AF144529 | Cedrus atlantica | AAE60293.1 | AF233745 | Lycopersicon esculentum |
| AAE74018.2 | AF144525 | Tsuga canadensis | SEQ ID NO. 568 | | |
| AAE74002.2 | AF144509 | Pseudotsuga sinensis | AAC28436.1 | AF195029 | Glycine max |
| AAE74001.2 | AF144508 | Pseudotsuga menziesii | AAC28435.1 | AF195028 | Glycine max |
| AAE73993.2 | AF144500 | Pinus banksiana | AAD46188.1 | AF156691 | Nicotiana plumbaginifolia |
| AAE73992.1 | AF144499 | Pinus banksiana | CBA68234.1 | X99972 | Brassica oleracea |
| CAB97359.1 | AJ278455 | Juglans nigra | | | |
| AAE74003.2 | AF144510 | Pseudotsuga sinensis | | | |
| AAE73999.2 | AF144506 | Pseudotsuga menziesii | | | |
| AAE74007.2 | AF144514 | Abies firma | | | |

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| AAA34094.1 | M80489 | Nicotiana plumbaginifolia | AAA34096.1 | M80492 | Nicotiana plumbaginifolia |
| AAF98344.1 | AF275745 | Lycopersicon esculentum | AAG01028.1 | AF289025 | Cucumis sativus |
| AAD55399.1 | AF179442 | Lycopersicon esculentum | SEQ ID NO. 569 | | |
| AAA34052.1 | M27888 | Nicotiana plumbaginifolia | AAC49186.1 | U37088 | Simmondsia chinensis |
| CAA54046.1 | X76536 | Solanum tuberosum | AAG28600.1 | AF247134 | Limnanthes douglasii |
| AAA34098.1 | M80490 | Nicotiana plumbaginifolia | AAC34858.1 | AF082033 | Hemerocallis hybrid cultiv |
| AB411898.1 | U84891 | Mesembryanthemum crystallinum | AB472178.1 | AF009563 | Brassica napus |
| CAA52107.1 | X73901 | Dunaliella bioculata | AAA96054.1 | U50771 | Brassica napus |
| BAA06629.1 | D31843 | Oryza sativa | CAA71898.1 | Y11007 | Brassica juncea |
| AB60276.1 | U09989 | Zea mays | AAK11266.1 | AF333040 | Dunaliella salina |
| CAC29435.1 | AJ310523 | Vicia faba | CAC17746.1 | AJ291728 | Zea mays |
| AAA34173.1 | M60166 | Lycopersicon esculentum | AAC25109.1 | AF054497 | Brassica napus |
| CAB69824.1 | AJ271439 | Prunus persica | AAC25110.1 | AF054498 | Brassica napus |
| AAD46187.1 | AF156683 | Nicotiana plumbaginifolia | AAC25111.1 | AF054499 | Brassica rapa |
| AB49042.1 | U54690 | Dunaliella acidophila | AAC25112.1 | AF054500 | Brassica oleracea |
| CAA59799.1 | X85804 | Phaseolus vulgaris | SEQ ID NO. 571 | | |
| AB84202.2 | AF029256 | Kosteletzkya virginica | AAD41126.1 | AF159061 | Oryza sativa subsp. indica |
| CAA47275.1 | X66737 | Nicotiana plumbaginifolia | BAA92697.1 | AB039916 | Vicia faba |
| AAB35314.2 | S79323 | Vicia faba | BAA92698.1 | AB039917 | Vicia faba |
| BAA37150.1 | AB022442 | Vicia faba | CAC11129.1 | AJ298829 | Fagus sylvatica |
| CAC29436.1 | AJ310524 | Vicia faba | AAC72838.1 | AF097182 | Oryza sativa |
| AAK31799.1 | AY029190 | Lilium longiflorum | AAD09953.1 | AF107464 | Hevea brasiliensis |
| CAA54045.1 | X76535 | Solanum tuberosum | CAB81126.1 | Z26041 | Helianthus annuus |
| BAA01058.1 | D10207 | Oryza sativa | AAA91806.1 | U49113 | Oryza sativa |
| AAB17186.1 | U72148 | Lycopersicon esculentum | CAB07806.1 | Z93771 | Nicotiana tabacum |
| CAB85495.1 | AJ132892 | Medicago truncatula | AAD48068.1 | AF173881 | Oryza sativa subsp. indica |
| CAB85494.1 | AJ132891 | Medicago truncatula | CAB46506.1 | AJ007496 | Nicotiana tabacum |
| CAA59800.1 | X85805 | Zea mays | AAD22116.1 | AF134552 | Oryza sativa subsp. indica |
| BAA08134.1 | D45189 | Zostera marina | BAA92699.1 | AB039918 | Vicia faba |
| CAB69823.1 | AJ271438 | Prunus persica | CAA49849.1 | X70399 | Medicago sativa |
| AAD46186.1 | AF156679 | Nicotiana plumbaginifolia | CAA40687.1 | X57439 | Brassica napus |
| AAD31896.1 | AF145478 | Mesembryanthemum crystallinum | CAB07807.1 | Z93772 | Nicotiana tabacum |
| BAA90510.2 | AP001111 | Oryza sativa | CAA07471.1 | AJ007333 | Catharanthus roseus |
| AAD11617.1 | AF050495 | Lycopersicon esculentum | AAF66353.1 | AF283668 | Oryza sativa subsp. indica |
| AAD11618.1 | AF050496 | Lycopersicon esculentum | CAA81395.1 | Z26654 | Acetabularia cliftonii |
| AAA34138.1 | M96324 | Lycopersicon esculentum | CAA87385.1 | Z47076 | Malus x domestica |
| CAA63790.1 | X93592 | Dunaliella bioculata | CAA05491.1 | AJ002485 | Medicago sativa |
| AAA81348.1 | U38965 | Vicia faba | CAA82263.1 | Z28627 | Acetabularia cliftonii |
| AAK32118.1 | AF308816 | Hordeum vulgare | CAA07470.1 | AJ007332 | Catharanthus roseus |
| AAK32119.1 | AF308817 | Hordeum vulgare | | | |
| AAF97591.1 | AF263917 | Lycopersicon esculentum | | | |

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| CAA88254.1 | Z48221 | Phaseolus vulgaris | AA29975.1 | AF188062 | Lactuca sativa |
| AAD38956.1 | AF156101 | Chlamydomonas reinhardtii | AAD41765.1 | AF111842 | Hevea brasiliensis |
| BAA92244.1 | AB038648 | Vicia faba | AAD41766.1 | AF111843 | Hevea brasiliensis |
| AAA33545.1 | M60215 | Zea mays | AAC32209.1 | AF082326 | Haematococcus pluvialis |
| CAA56766.1 | X80788 | Medicago sativa subsp. x varia | AAC32208.1 | AF082325 | Haematococcus pluvialis |
| CAB07803.1 | Z93768 | Nicotiana tabacum | BAA33978.1 | AB019034 | Haematococcus pluvialis |
| CAA05493.1 | AJ002487 | Medicago sativa | CAA70850.1 | Y09634 | Nicotiana tabacum |
| CAB07804.1 | Z93769 | Nicotiana tabacum | AAF91499.1 | AF227951 | Daucus carota |
| CAA82264.1 | Z28632 | Acetabularia cliftonii | AAC32601.1 | AF082869 | Chlamydomonas reinhardtii |
| CAB07805.1 | Z93770 | Nicotiana tabacum | SEQ ID NO. 573 | | |
| CAA45119.1 | X63558 | Brassica oleracea | BAA05079.1 | D26086 | Petunia x hybrida |
| CAA05492.1 | AJ002486 | Medicago sativa | AAD26942.1 | AF119050 | Datisca glomerata |
| AAA74625.1 | U31773 | Oryza sativa | AAC06243.1 | AF053077 | Nicotiana tabacum |
| CAA05494.1 | AJ002488 | Medicago sativa | BAA05077.1 | D26084 | Petunia x hybrida |
| CAA40686.1 | X57438 | Brassica napus | BAA05076.1 | D26083 | Petunia x hybrida |
| CAA87386.1 | Z47077 | Malus x domestica | BAA05078.1 | D26085 | Petunia x hybrida |
| CAA87387.1 | Z47078 | Malus x domestica | AAK01713.1 | AF332876 | Oryza sativa |
| BAA92334.1 | AB038787 | Vicia faba | AAB53260.1 | U76554 | Brassica rapa |
| CAC11128.1 | AJ298828 | Fagus sylvatica | AAB53261.1 | U76555 | Brassica rapa |
| BAA92335.1 | AB038788 | Vicia faba | BAA96070.1 | AB035132 | Petunia x hybrida |
| CAC09574.1 | AJ298986 | Fagus sylvatica | BAA21919.1 | AB006597 | Petunia x hybrida |
| BAA92337.1 | AB038790 | Vicia faba | BAA96071.1 | AB035133 | Petunia x hybrida |
| BAA92336.1 | AB038789 | Vicia faba | BAA21927.1 | AB006605 | Petunia x hybrida |
| BAA92338.1 | AB038791 | Vicia faba | BAA19112.1 | AB000453 | Petunia x hybrida |
| AAG29592.1 | AF196285 | Medicago sativa subsp. x varia | BAA21928.1 | AB006606 | Petunia x hybrida |
| SEQ ID NO. 572 | | | BAA21922.1 | AB006600 | Petunia x hybrida |
| AAF36996.1 | AF236092 | Brassica oleracea var. botrytis | BAA19114.1 | AB000455 | Petunia x hybrida |
| AAF29978.1 | AF188065 | Oryza sativa | BAA21920.1 | AB006598 | Petunia x hybrida |
| AAB67743.1 | U48963 | Clarkia breweri | BAA21921.1 | AB006599 | Petunia x hybrida |
| BAB40974.1 | AB049816 | Nicotiana tabacum | BAA19110.1 | AB000451 | Petunia x hybrida |
| AAF29974.1 | AF188061 | Adonis palaeostina | BAA21926.1 | AB006604 | Petunia x hybrida |
| AAF29973.1 | AF188060 | Adonis palaeostina | BAA21925.1 | AB006603 | Petunia x hybrida |
| CAA57947.1 | X82627 | Clarkia breweri | BAA19111.1 | AB000452 | Petunia x hybrida |
| AAF29976.1 | AF188063 | Lactuca sativa | BAA21923.1 | AB006601 | Petunia x hybrida |
| BAB40973.1 | AB049815 | Nicotiana tabacum | BAA21924.1 | AB006602 | Petunia x hybrida |
| AAF29977.1 | AF188064 | Tagetes erecta | BAA19113.1 | AB000454 | Petunia x hybrida |
| AAG10423.1 | AF251011 | Tagetes erecta | BAA19926.1 | AB000456 | Petunia x hybrida |
| AAB94132.1 | AF031079 | Camptotheca acuminata | SEQ ID NO. 574 | | |
| AAB94133.1 | AF031080 | Camptotheca acuminata | AAC32146.1 | AF051246 | Picea mariana |
| AAB67742.1 | U48962 | Clarkia xantiana | | | |

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| BAA96836.1 | AB026565 | Oryza sativa |
| BBA28276.1 | AB014058 | Oryza sativa |
| AAC35983.1 | AF088915 | Petunia x hybrida |
| BAA21650.1 | D78172 | Spinacia oleracea |
| BAA96838.1 | AB026567 | Oryza sativa |
| CRAA09603.1 | AJ011383 | Cicer arietinum |
| BAA96834.1 | AB026563 | Oryza sativa |
| | | |
| SEQ ID NO. | 575 | |
| AAF08537.1 | AF191098 | Pisum sativum |
| BAA96460.1 | AB029400 | Brassica rapa |
| AAC25999.1 | AF072289 | Mesembryanthemum crystallinum |
| AAA19005.1 | U10283 | Flaveria bidentis |
| AAB67996.1 | U72142 | Helianthus annuus |
| BAA01510.1 | D10659 | Spinacia oleracea |
| AAF91407.1 | AF271362 | Lolium perenne |
| AAF65509.1 | AF108881 | Capsicum annum |
| AAB40609.1 | U55019 | Saccharum officinarum |
| AAA93030.1 | U50150 | Glycine max |
| CAA50511.1 | X71388 | Pisum sativum |
| BAA02018.1 | D11465 | Spinacia oleracea |
| CAA86071.1 | Z37990 | Pisum sativum |
| AAA19004.1 | U10282 | Flaveria bidentis |
| BAA03798.1 | D16292 | Oryza sativa |
| CAA53073.1 | X75324 | Lycopersicon esculentum |
| | | |
| SEQ ID NO. | 576 | |
| AAA96980.1 | L19093 | Mitochondrion Pisum sativum |
| CAAB89050.1 | Z49191 | Beta vulgaris |
| CAA10815.2 | AJ222545 | Nicotiana tabacum |
| AAK27450.1 | AF329814 | Oryza sativa subsp. japonica |
| AAF28764.1 | AF218381 | Oryza sativa subsp. japonica |
| CAA98189.1 | Z73961 | Lotus japonicus |
| AAD34358.1 | AF126055 | Zea mays |
| BAR76424.1 | AB024996 | Cicer arietinum |
| AAF91343.1 | AF250327 | Oryza sativa |
| AAD34356.1 | AF126053 | Zea mays |
| ABA97458.1 | AF042330 | Brassica rapa |
| AAD44769.1 | AF146341 | Physcomitrella patens |
| AAD44768.1 | AF146340 | Physcomitrella patens |
| AAD26198.1 | AF115476 | Physcomitrella patens |
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| AF051223 | Picea mariana | |
| AF233446 | Physcomitrella patens | |
| Z73962 | Lotus japonicus | |
| S79308 | Gossypium hirsutum | |
| AB029510 | Oryza sativa | |
| S79309 | Gossypium hirsutum | |
| AF126052 | Zea mays | |
| AF233447 | Physcomitrella patens | |
| AF239751 | Tradescantia virginiana | |
| AP001859 | Oryza sativa | |
| AB029508 | Oryza sativa | |
| AB029509 | Oryza sativa | |
| AF126054 | Zea mays | |
| AF161018 | Erysimum cheiri | |
| L08128 | Volvox carteri | |
| Z49152 | Beta vulgaris | |
| Z49901 | Pisum sativum | |
| Z49900 | Pisum sativum | |
| Z73944 | Lotus japonicus | |
| Z49902 | Pisum sativum | |
| Z73948 | Lotus japonicus | |
| AJ001367 | Daucus carota | |
| AF108883 | Capsicum annum | |
| U38466 | Lycopersicon esculentum | |
| Z73936 | Lotus japonicus | |
| Z73947 | Lotus japonicus | |
| U35026 | Petunia x hybrida | |
| | | |
| SEQ ID NO. | 577 | |
| BAA08366.2 | D49367 | Lithospermum erythrhorizon |
| CAC36095.1 | X69955 | Glycine max |
| AAF91308.1 | AF239685 | Rubus idaeus |
| AAC24504.1 | AF041050 | Populus tremuloides |
| BAA08365.1 | D49366 | Lithospermum erythrhorizon |
| AAB18638.1 | U50846 | Nicotiana tabacum |
| AAC39366.1 | AF008184 | Populus x generosa |
| AAF91309.1 | AF239686 | Rubus idaeus |
| AAF37732.1 | AF052221 | Lolium perenne |
| CAA36850.1 | X52623 | Oryza sativa |
| AAB18637.1 | U50845 | Nicotiana tabacum |
| AAA33842.1 | M62755 | Solanum tuberosum |

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| AAG43823.1 | AF212317 | Capsicum annuum | AAB68661.1 | U90214 | Nicotiana tabacum |
| AAD40664.1 | AF150686 | Solanum tuberosum | AAD34570.1 | AF143442 | Lycopersicon esculentum |
| AAF91310.1 | AF239687 | Rubus idaeus | BAA87835.1 | AP000815 | Oryza sativa |
| BAA07828.1 | D43773 | Nicotiana tabacum | AAB31249.1 | S73826 | Solanum tuberosum |
| AAC39365.1 | AF008183 | Populus x generosa | AAB31250.2 | S73827 | Solanum tuberosum |
| AAC24503.1 | AF041049 | Populus tremuloides | CAA57894.1 | X82544 | Solanum tuberosum |
| CAA31696.1 | X13324 | Petroselinum crispum | AAB31251.2 | S73828 | Solanum tuberosum |
| CAA31697.1 | X13325 | Petroselinum crispum | BAA06486.1 | D30809 | Triticum aestivum |
| AAF37733.1 | AF052222 | Lolium perenne | AAC24123.1 | AF067187 | Cichorium intybus |
| AAF37734.1 | AF052223 | Lolium perenne | BAA06487.1 | D30810 | Triticum aestivum |
| AAB42383.1 | U39405 | Pinus taeda | BAA02303.2 | D12919 | Triticum aestivum |
| AAB42382.1 | U39404 | Pinus taeda | | | |
| AAA92669.1 | U12013 | Pinus taeda | SEQ ID NO. 580 | | |
| AAA92668.1 | U12012 | Pinus taeda | CAA64152.1 | X94375 | Pimpinella brachycarpa |
| AAD40665.1 | AF150687 | Solanum tuberosum | CAA64221.1 | X94449 | Pimpinella brachycarpa |
| AAF73997.2 | AF144504 | Picea smithiana | CAA64491.1 | X95193 | Pimpinella brachycarpa |
| AAF73995.2 | AF144502 | Pinus armandii | CAA63222.1 | X92489 | Glycine max |
| AAF73998.2 | AF144505 | Cathaya argyrophylla | BAA93463.1 | AB028075 | Physcomitrella patens |
| AAF73994.2 | AF144501 | Pinus armandii | AAA74017.1 | U30475 | Glycine max |
| AAF73996.2 | AF144503 | Pinus armandii | BAB18169.1 | AB042767 | Zinnia elegans |
| CAA49575.1 | X69954 | Glycine max | BAA93462.1 | AB028074 | Physcomitrella patens |
| AAF74016.2 | AF144523 | Nothotsuga longibracteata | BAA93464.1 | AB028076 | Physcomitrella patens |
| AAF74004.2 | AF144511 | Pseudotsuga sinensis | BAA93465.1 | AB028077 | Physcomitrella patens |
| AAF74022.2 | AF144529 | Cedrus atlantica | BAA93466.1 | AB028078 | Physcomitrella patens |
| AAF74019.2 | AF144526 | Tsuga canadensis | BAB18171.1 | AB042769 | Zinnia elegans |
| AAF74018.2 | AF144525 | Tsuga canadensis | CAA64417.1 | X94947 | Lycopersicon esculentum |
| AAF74001.2 | AF144508 | Pseudotsuga menziesii | BAA93461.1 | AB028073 | Physcomitrella patens |
| AAF74002.2 | AF144509 | Pseudotsuga sinensis | BAA93468.1 | AB028080 | Physcomitrella patens |
| CAB97359.1 | AJ278455 | Juglans nigra | BAA93467.1 | AB028079 | Physcomitrella patens |
| AAF74003.2 | AF144510 | Pseudotsuga sinensis | | | |
| AAF73993.2 | AF144500 | Pinus banksiana | SEQ ID NO. 581 | | |
| AAF73999.2 | AF144506 | Pseudotsuga menziesii | CAA91162.1 | Z54351 | Spinacia oleracea |
| AAF73992.1 | AF144499 | Pinus banksiana | AAD33936.1 | AF144684 | Chloroplast Pisum sativum |
| AAF74007.2 | AF144514 | Abies firma | AAC05019.1 | AF039304 | Chloroplast Zea mays |
| AAAG4913.1 | U23787 | Sorghum bicolor | AAB96657.1 | AF039305 | Chloroplast Zea mays |
| AAF74000.2 | AF144507 | Pseudotsuga menziesii | | | |
| SEQ ID NO. 578 | | | SEQ ID NO. 582 | | |
| BAA02305.2 | D12921 | Triticum aestivum | AAF16526.1 | AF191301 | Medicago sativa |
| AAF06696.1 | AF031487 | Nicotiana tabacum | | | |
| CAA40102.1 | X56782 | Triticum aestivum | SEQ ID NO. 583 | | |
| | | | BAA92986.1 | AP001550 | Oryza sativa |

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| AAF19807.1 | AAF180356 | Brassica oleracea | AAB80919.1 | AF020787 | Oryza sativa |
| AAF19403.1 | AF203481 | Lycopersicon esculentum | SEQ ID NO. 590 | | |
| AAF19402.1 | AF203480 | Lycopersicon esculentum | AAC09422.1 | M68929 | Mitochondrion Marchantia |
| BAA05648.1 | D26601 | Nicotiana tabacum | polymorpha | | |
| CAA73068.1 | Y12465 | Sorghum bicolor | SEQ ID NO. 603 | | |
| BAA34675.1 | AB011670 | Triticum aestivum | AAD02328.1 | AF044573 | Brassica oleracea |
| BAA13440.1 | D87707 | Ipomoea batatas | AAC49651.1 | U68461 | Striga asiatica |
| AAF23900.1 | AF194413 | Oryza sativa | AAC49652.1 | U68462 | Striga asiatica |
| AAF23901.2 | AF194414 | Oryza sativa | AAF40438.1 | AF234528 | Avena nuda |
| AAD17800.1 | AF090835 | Mesembryanthemum crystallinum | BAA89214.1 | AB032361 | Mimosa pudica |
| CAA73067.1 | Y12464 | Sorghum bicolor | AAC31886.1 | AF059484 | Gossypium hirsutum |
| BAA12715.1 | D85039 | Zea mays | CAA39280.1 | X55751 | Solanum tuberosum |
| CAA89202.1 | Z49233 | Chlamydomonas eugametos | CAA45149.1 | X63603 | Nicotiana tabacum |
| AAF21062.1 | AF216527 | Dunaliella tertiolecta | AAF71265.1 | AF246715 | Phalaenopsis sp. 'True Lady' |
| AAB80693.1 | U69174 | Glycine max | CAA33874.1 | X15865 | Oryza sativa |
| CAA39936.1 | X56599 | Daucus carota | CAA39278.1 | X55749 | Solanum tuberosum |
| AAB47181.1 | S82324 | Zea mays | AAD41039.1 | AF112538 | Malva pusilla |
| BAA12691.1 | D84507 | Zea mays | ANG10041.1 | AF288226 | Setaria italica |
| AAG01179.1 | AF289237 | Zea mays | AAD03692.1 | AF172094 | Picea rubens |
| CAA58750.1 | X83869 | Daucus carota | AA03741.1 | AF111812 | Brassica napus |
| BAA12692.1 | D84508 | Zea mays | CAA47899.1 | X67666 | Pisum sativum |
| CAA57157.1 | X81394 | Oryza sativa | AAF82805.1 | AF282624 | Helianthus annuus |
| AAD23582.1 | AF128443 | Glycine max | CAA48609.1 | X68649 | Pisum sativum |
| BAA19553.1 | D64036 | Oryza sativa | AAF31643.1 | AF143208 | Vigna radiata |
| CAA65244.1 | X95997 | Solanum tuberosum | CAA39281.1 | X55752 | Solanum tuberosum |
| CAA07481.1 | AJ007366 | Zea mays | CAA34356.1 | X16280 | Oryza sativa |
| AAG46110.1 | AC073166 | Oryza sativa | CAA55923.1 | X79378 | Sorghum bicolor |
| CAA65500.1 | X96723 | Medicago sativa | AAF71264.1 | AF246714 | Phalaenopsis sp. 'True Lady' |
| AAA69507.1 | U28376 | Zea mays | AAB38512.1 | U81047 | Pisum sativum |
| AAD28192.2 | AF115406 | Solanum tuberosum | AAB38511.1 | U81046 | Pisum sativum |
| BAA22410.1 | D38452 | Zea mays | AAB18642.1 | U76191 | Pisum sativum |
| CAA71142.1 | Y10036 | Cucumis sativus | AAB18641.1 | U76190 | Pisum sativum |
| AAG36872.1 | AF239819 | Zea mays | CAA62028.1 | X90378 | Pisum sativum |
| AAC04324.1 | U73937 | Nicotiana tabacum | CAA39279.1 | X55750 | Solanum tuberosum |
| BAA02698.1 | D13436 | Oryza sativa | AAC64127.1 | AF091809 | Anemia phyllitidis |
| BAA83689.1 | AB011968 | Oryza sativa | AAC16054.1 | AF061019 | Coleochaete scutata |
| CAA72362.1 | Y11649 | Zea mays | AAB38514.1 | U81049 | Pisum sativum |
| CAA43659.1 | X61387 | Zea mays | AAB18644.1 | U76193 | Pisum sativum |
| BAA05649.1 | D26602 | Nicotiana tabacum | AAC16055.1 | AF061020 | Mesostigma viride |
| SEQ ID NO. 584 | | | | | |

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| AAC64128.1 | AF091810 | Anemia phyllitidis | CAA44820.1 | X63106 | Nicotiana tabacum |
| AAA33433.1 | J01238 | Zea mays | BAA34919.1 | AB012716 | Salix gilgiana |
| AAC05272.1 | AF049106 | Glycine max | AAB65162.1 | AF002667 | Solanum commersonii |
| CAA33873.1 | X15864 | Oryza sativa | CAA47345.1 | X66874 | Phaseolus vulgaris |
| AAF87302.1 | AF281323 | Magnolia denudata | AAB91473.1 | AF035458 | Spinacia oleracea |
| BAA09450.1 | D50839 | Chlamydomonas reinhardtii | AAB96660.1 | AF039084 | Spinacia oleracea |
| BAA09449.1 | D50838 | Chlamydomonas reinhardtii | AAB91472.1 | AF035457 | Spinacia oleracea |
| AAC16053.1 | AF061018 | Scherffelia dubia | SEQ ID NO. 607 | | |
| AAA33940.1 | J01297 | Glycine max | AAB05641.1 | U41385 | Ricinus communis |
| CAA23728.1 | V00450 | Glycine max | AAD28260.1 | AF131223 | Datisca glomerata |
| AAA34243.1 | M33963 | Volvox carteri | CAA77575.1 | Z11499 | Medicago sativa |
| BAA25911.1 | AB013098 | Nannochloris bacillaris | CAC21228.1 | AJ277377 | Triticum turgidum subsp. d |
| AAD48335.1 | AF090969 | Selaginella apoda | CAC21230.1 | AJ277379 | Triticum turgidum subsp. d |
| AAD48336.1 | AF090970 | Cosmarium botrytis | AAA19660.1 | U11496 | Triticum aestivum |
| AAC64129.1 | AF091811 | Psilotum nudum | BAB18780.1 | AB047268 | Cucumis sativus |
| CAA39276.1 | X55746 | Solanum tuberosum | CAC21229.1 | AJ277378 | Triticum turgidum subsp. durum |
| SEQ ID NO. 606 | | | CAC21231.1 | AJ277380 | Triticum turgidum subsp. durum |
| AAB88009.1 | AF035414 | Brassica napus | BAA92322.1 | AB039278 | Oryza sativa |
| AAB88134.1 | AF034618 | Spinacia oleracea | AAD55566.1 | AF110784 | Volvox carteri f. nagariensis |
| CAA47948.1 | X67711 | Oryza sativa | AAD02069.1 | AF036939 | Chlamydomonas reinhardtii |
| CAB72129.1 | AJ249330 | Cucumis sativus | AAC49896.1 | AF027727 | Chlamydomonas reinhardtii |
| CAB72130.1 | AJ249331 | Cucumis sativus | CAA72092.1 | Y11209 | Nicotiana tabacum |
| CAA37971.1 | X54030 | Lycopersicon esculentum | SEQ ID NO. 608 | | |
| AAF34134.1 | AF161180 | Malus x domestica | AAB72047.1 | AF006489 | Gossypium hirsutum |
| AAB88133.1 | AF034617 | Spinacia oleracea | CAA05979.1 | AJ003197 | Lupinus albus |
| AAB88132.1 | AF034616 | Spinacia oleracea | CAA44054.1 | X62123 | Solanum tuberosum |
| AAB97316.1 | AF033852 | Spinacia oleracea | AAB49700.1 | U89839 | Lycopersicon esculentum |
| AAB42159.1 | L41253 | Lycopersicon esculentum | CAA40782.1 | X57557 | Solanum tuberosum |
| CAA42685.1 | X60088 | Daucus carota | BAA02161.1 | D12637 | Oryza sativa |
| CAA30018.1 | X06932 | Petunia x hybrida | CAA41812.1 | X59086 | Zea mays |
| CAA43711.1 | X61491 | Spinacia oleracea | CAA40781.1 | X57556 | Zea mays |
| CAA37970.1 | X54029 | Lycopersicon esculentum | CAA33743.1 | X15712 | Zea mays |
| AAB99745.1 | AF005993 | Triticum aestivum | CAA33742.1 | X15711 | Zea mays |
| CAA67867.1 | X99515 | Pisum sativum | CAA65119.1 | X95863 | Triticum turgidum |
| CAA44620.1 | X62799 | Glycine max | CAA26600.1 | X02842 | Zea mays |
| AAB00730.1 | M76725 | Chlamydomonas reinhardtii | CAA65120.1 | X95864 | Triticum turgidum |
| AAA34139.1 | L08830 | Lycopersicon esculentum | CAA46311.1 | X65194 | Chlamydomonas reinhardtii |
| CAB72128.1 | AJ249329 | Cucumis sativus | AAA33027.1 | M76669 | Chlorella kessleri |
| AAA21808.1 | L23551 | Spinacia oleracea | AAB72048.1 | AF006490 | Gossypium hirsutum |
| AAB86942.1 | AF031241 | Glycine max | | | |

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| BAA08104.1 | D45074 | Panicum miliaceum | AAF61392.1 | AF133894 | Persea americana |
| BAA08103.1 | D45073 | Panicum miliaceum | CAB38119.1 | AJ010296 | Zea mays |
| BAA08105.1 | D45075 | Panicum miliaceum | CAB38118.1 | AJ010295 | Zea mays |
| SEQ ID NO. 609 | | | AAG34814.1 | AF243379 | Glycine max |
| CAA29056.1 | X05512 | Spinacia oleracea | AAG34812.1 | AF243377 | Glycine max |
| AAA20823.1 | M87435 | Zea mays | CAA09190.1 | AJ010451 | Alopecurus myosuroides |
| AAB81994.1 | AF026400 | Onobrychis viciifolia | CAA09193.1 | AJ010454 | Alopecurus myosuroides |
| BAA96362.1 | AB043962 | Bruguiera gymnorrhiza | AAG34811.1 | AF243376 | Glycine max |
| AAB40980.1 | U22330 | Volvox carteri | CAA09192.1 | AJ010453 | Alopecurus myosuroides |
| SEQ ID NO. 610 | | | CAA09191.1 | AJ010452 | Alopecurus myosuroides |
| CAA46507.1 | X65540 | Plastid Triticum aestivum | AAD56395.1 | AF184059 | Triticum aestivum |
| CAA52439.1 | X74418 | Chlamydomonas reinhardtii | CAA68993.1 | Y07721 | Petunia x hybrida |
| BAA94305.1 | AB035313 | Chlamydomonas sp. W80 | CAA39487.1 | X56012 | Triticum aestivum |
| CAA74960.1 | Y14608 | Chlamydomonas reinhardtii | AAC64007.1 | AF062403 | Oryza sativa |
| CAA61409.1 | X89006 | Saccharum hybrid cultivar H65-7052 | AAG34817.1 | AF244674 | Zea mays |
| BAA25422.1 | AB007193 | Oryza sativa | AAA20585.1 | U12679 | Zea mays |
| AAF23509.1 | AF218845 | Porteresia coarctata | CAA56047.1 | X79515 | Zea mays |
| AAG31813.1 | AF317553 | Beta vulgaris | AAA33470.1 | M16901 | Zea mays |
| AAA32915.1 | M80597 | Beta vulgaris | AAA33469.1 | M16902 | Zea mays |
| AAA82750.1 | U20179 | Brassica napus | AAG34821.1 | AF244678 | Zea mays |
| AAD12243.1 | AF081796 | Brassica napus | AAG34820.1 | AF244677 | Zea mays |
| CAA48719.1 | X68826 | Pisum sativum | CAA39480.1 | X56004 | Triticum aestivum |
| AAD25541.1 | AF134051 | Solanum tuberosum | AAG34823.1 | AF244680 | Zea mays |
| CAA43860.1 | X61690 | Spinacia oleracea | AAG34818.1 | AF244675 | Zea mays |
| CAB39759.1 | AJ133598 | Plastid Pisum sativum | AAG34822.1 | AF244679 | Zea mays |
| CAA37908.1 | X53957 | Triticum aestivum | AAG34816.1 | AF244673 | Zea mays |
| BAA25423.1 | AB007194 | Oryza sativa | CAA05354.1 | AJ002380 | Oryza sativa |
| CAB46084.1 | AJ243392 | Pisum sativum | CAB66333.1 | AJ279691 | Betula pendula |
| AAD28755.1 | AF130251 | Musa acuminata | CAA05355.1 | AJ002381 | Oryza sativa |
| CAA54265.1 | X76946 | Solanum tuberosum | SEQ ID NO. 612 | | |
| SEQ ID NO. 611 | | | AAC19396.1 | AF069318 | Mesembryanthemum crystallinum |
| AAB65163.1 | AF002692 | Solanum commersonii | AAD28640.1 | AF068686 | Glycine max |
| CAA55039.1 | X78203 | Hyoscyamus muticus | CAA07683.1 | AJ007789 | Nicotiana tabacum |
| BAA01394.1 | D10524 | Nicotiana tabacum | BAA92518.1 | AP001383 | Oryza sativa |
| AAA33930.1 | M84968 | Silene vulgaris | BAA90346.1 | AP001080 | Oryza sativa |
| CAA96431.1 | Z71749 | Nicotiana plumbaginifolia | AAC12646.1 | AF055296 | Zantedeschia aethiopica |
| AAA33931.1 | M84969 | Silene vulgaris | SEQ ID NO. 615 | | |
| | | | CAB56544.1 | X51608 | Triticum aestivum |
| | | | CAA41020.1 | X57952 | Triticum aestivum |

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| CAA72118.1 | Y11248 | Pisum sativum | AAB17070.1 | U54770 | Lycopersicon esculentum |
| CAA30499.1 | X07654 | Spinacia oleracea | AAK00946.1 | AF318211 | Taxus cuspidata |
| AAA34036.1 | M21338 | Spinacia oleracea | AAG41777.1 | AF212991 | Cucurbita maxima |
| AAA33034.1 | M73707 | Mesembryanthemum crystallinum | AAK11616.1 | AF326277 | Hordeum vulgare |
| AAA33090.1 | M36123 | Chlamydomonas reinhardtii | AAF20011.1 | AF216313 | Helianthus annuus |
| AAF36402.1 | AF228914 | Chlamydomonas reinhardtii | CAA50647.1 | X71656 | Solanum melongena |
| AAD55057.1 | AF173671 | Beta vulgaris | AAE27282.1 | AF122821 | Capsicum annuum |
| | | | AAB94593.1 | AF022464 | Glycine max |
| | | | BAA13076.1 | D86351 | Glycine max |
| SEQ ID NO. 616 | | | AAA19701.1 | I24438 | Thlaspi arvense |
| CAA05365.1 | AJ002391 | Solanum tuberosum | AAC48987.1 | U09610 | Berberis stolonifera |
| AAB61215.1 | AF002226 | Nicotiana tabacum | BAB12433.1 | AB025030 | Coptis japonica |
| AAC50019.1 | U39747 | Ipomoea nil | CAB56503.1 | AJ238612 | Catharanthus roseus |
| CAA41220.1 | X58282 | Zea mays | CAA50648.1 | X71657 | Solanum melongena |
| BAA19156.1 | AB000637 | Canavalia gladiata | AAC39452.1 | AF014800 | Eschscholzia californica |
| AAC78104.1 | AF093632 | Oryza sativa | AAD38930.1 | AF135485 | Glycine max |
| CAA77641.1 | Z11540 | Triticum aestivum | AAD44150.1 | AF124815 | Mentha spicata |
| CAA90679.1 | Z50799 | Hordeum vulgare | AAC39453.1 | AF014801 | Eschscholzia californica |
| CAB44297.1 | AJ006708 | Zea mays | BAA12159.1 | D83968 | Glycine max |
| | | | AAF05621.1 | AF191772 | Papaver somniferum |
| SEQ ID NO. 617 | | | AAB94587.1 | AF022458 | Glycine max |
| AAA91049.1 | I31937 | Brassica rapa | CAA04116.1 | AJ000477 | Helianthus tuberosus |
| AAC97524.1 | U12150 | Glycine max | CAA04117.1 | AJ000478 | Helianthus tuberosus |
| AAB17095.1 | U72942 | Oryza sativa | CAB43505.1 | AJ239051 | Cicer arietinum |
| BAA85411.1 | AF000615 | Oryza sativa | BAA93632.1 | AB024931 | Lotus japonicus |
| AAC00503.1 | AF044059 | Oryza sativa | BAA76380.1 | AB023636 | Glycyrrhiza echinata |
| AAI17880.1 | AF293407 | Phaseolus coccineus | | | |
| AAG38520.1 | AF283535 | Citrus x paradisi | | | |
| CAA78359.1 | Z13956 | Glycine max | | | |
| | | | SEQ ID NO. 621 | | |
| SEQ ID NO. 618 | | | AAB01376.1 | M96549 | Lycopersicon esculentum |
| AAA91049.1 | I31937 | Brassica rapa | AAA33748.1 | M99431 | Ipomoea nil |
| AAC97524.1 | U12150 | Glycine max | CAA77978.1 | Z11920 | Oryza sativa |
| AAC00503.1 | AF044059 | Oryza sativa | AAD30456.1 | AF123259 | Lycopersicon esculentum |
| AAB17095.1 | U72942 | Oryza sativa | AAD11549.1 | U55859 | Triticum aestivum |
| BAA85411.1 | AF000615 | Oryza sativa | AAB26482.2 | S59780 | Zea mays |
| AAG17880.1 | AF293407 | Phaseolus coccineus | AAA16785.1 | I14594 | Catharanthus roseus |
| AAG38520.1 | AF283535 | Citrus x paradisi | BAA90487.1 | AB037681 | Oryza sativa |
| CAA78359.1 | Z13956 | Glycine max | CAA44877.1 | X63195 | Nicotiana tabacum |
| | | | CAA82945.1 | Z30243 | Secale cereale |
| SEQ ID NO. 619 | | | AAF31705.1 | AF221856 | Euphorbia esula |
| AAF89209.1 | AF279252 | Vigna radiata | AAC32131.1 | AF051230 | Picea mariana |
| | | | AAD11550.1 | U55860 | Triticum aestivum |

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| CAA78738.1 | Z15018 | Oryza sativa | AAA99439.1 | L24547 | Volvox carteri |
| SEQ ID NO. 622 | | | CAA31334.1 | X12855 | Volvox carteri |
| AAA19708.1 | L10634 | Zea mays | AAA33804.1 | M33371 | Polytomella agilis |
| AAD10489.1 | U76746 | Triticum aestivum | AAA33803.1 | M33373 | Polytomella agilis |
| AAD20178.1 | AF059287 | Eleusine indica | AAB03892.1 | M33372 | Polytomella agilis |
| AAK09229.1 | AC084320 | Oryza sativa | AAB60936.1 | AF001379 | Chlamydomonas incerta |
| BAA02505.1 | D13224 | Oryza sativa | CAA38614.1 | X54845 | Pisum sativum |
| BAA06382.1 | D30717 | Oryza sativa | AAAD10493.1 | U76897 | Triticum aestivum |
| AAD20180.1 | AF059289 | Oryza sativa | BAA82639.1 | D63138 | Zinnia elegans |
| CAA55912.1 | X79367 | Eleusine indica | CAA38615.1 | X54846 | Pisum sativum |
| CAA38613.1 | X54844 | Oryza sativa | SEQ ID NO. 624 | | |
| AAD10490.1 | U76895 | Pisum sativum | BAA78764.1 | AB023482 | Oryza sativa |
| CAA48929.1 | X69185 | Triticum aestivum | AAF43496.1 | AF131222 | Lophopyrum elongatum |
| BAA82637.1 | D63136 | Anemia phyllitidis | AAK11674.1 | AF339747 | Lophopyrum elongatum |
| CAA49736.1 | X70184 | Zinnia elegans | AAG16628.1 | AY007545 | Brassica napus |
| AAA20186.1 | L10633 | Lupinus albus | BAA94509.1 | AB041503 | Populus nigra |
| BAA06381.1 | D30716 | Zea mays | BAA94510.1 | AB041504 | Populus nigra |
| CAA55022.1 | X78143 | Oryza sativa | AAK21965.1 | AY028699 | Brassica napus |
| CAA70891.1 | Y09741 | Oryza sativa | CAB51834.1 | U0069 | Oryza sativa |
| AAB03267.1 | U47660 | Hordeum vulgare | AAG03090.1 | AC073405 | Oryza sativa |
| AAD10488.1 | U76745 | Lupinus albus | AAF91337.1 | AF249318 | Glycine max |
| AAA34010.1 | M21297 | Triticum aestivum | AAF91336.1 | AF249317 | Glycine max |
| BAA82638.1 | D63137 | Glycine max | AAC61805.1 | U28007 | Lycopersicon esculentum |
| AAB64308.1 | U63927 | Zinnia elegans | AAF76307.1 | AF220602 | Lycopersicon pimpinellifolium |
| CAA52720.1 | X74656 | Daucus carota | AAB47424.1 | U59317 | Lycopersicon pimpinellifolium |
| AAD20181.1 | AF059290 | Zea mays | AAC27894.1 | AF023164 | Zea mays |
| AAD20179.1 | AF059288 | Eleusine indica | AAG35377.1 | AF290411 | Oryza meyeriana |
| AAD10487.1 | U76744 | Eleusine indica | AAB09771.1 | U67422 | Zea mays |
| CAA67056.1 | X98406 | Triticum aestivum | BAA94529.2 | AP001800 | Oryza sativa |
| AAD10492.1 | U76896 | Cicer arletinum | AAC27895.1 | AF023165 | Zea mays |
| CAA52718.1 | X74654 | Triticum aestivum | CAA73134.1 | Y12531 | Brassica oleracea |
| CAA37060.1 | X52878 | Zea mays | BAA94516.1 | AP001800 | Oryza sativa |
| AAA19709.1 | L10636 | Zea mays | AAK11566.1 | AF318490 | Lycopersicon hirsutum |
| CAA83853.1 | Z33402 | Zea mays | AAF34428.1 | AF172282 | Oryza sativa |
| CAA83847.1 | Z33382 | Solanum tuberosum | CAA97692.1 | Z73295 | Catharanthus roseus |
| CAA37061.1 | X52879 | Solanum tuberosum | BAA94517.1 | AP001800 | Oryza sativa |
| AAA19707.1 | L10635 | Zea mays | SEQ ID NO. 626 | | |
| CAA52719.1 | X74655 | Zea mays | AAD10241.1 | AF020716 | Triticum aestivum |
| AAA33102.1 | K03281 | Zea mays | CAB06653.1 | Z85984 | Oryza sativa |
| AAA33101.1 | M10064 | Chlamydomonas reinhardtii | | | |
| | | Chlamydomonas reinhardtii | | | |

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| AAG48835.1 | AC084218 | Oryza sativa | CAA39936.1 | X56599 | Daucus carota |
| AAD10242.1 | AF020717 | Triticum aestivum | CAA08995.1 | AJ010091 | Brassica napus |
| SEQ ID NO. 628 | | | BAA05649.1 | D26602 | Nicotiana tabacum |
| BAA90375.1 | AP001081 | Oryza sativa | AAF19403.1 | AF203481 | Lycopersicon esculentum |
| BAB03361.1 | AP002486 | Oryza sativa | AAC25423.1 | AF072908 | Nicotiana tabacum |
| CAG62901.1 | X91787 | Lupinus luteus | AAF19402.1 | AF203480 | Lycopersicon esculentum |
| SEQ ID NO. 629 | | | CAA65244.1 | X95997 | Solanum tuberosum |
| BAA96875.1 | AB045121 | Oryza sativa | CAA57898.1 | X82548 | Hordeum vulgare |
| BAA78746.1 | AB023482 | Oryza sativa | AAF19401.1 | AF203479 | Glycine max |
| AAG43550.1 | AF211532 | Nicotiana tabacum | AAD23582.1 | AF128443 | Glycine max |
| BAA90357.1 | AP001080 | Oryza sativa | AAF34436.1 | AF172282 | Oryza sativa |
| BAA77204.1 | AB026262 | Cicer arietinum | BAA05648.1 | D26601 | Nicotiana tabacum |
| BAA90806.1 | AP001168 | Oryza sativa | SEQ ID NO. 634 | | |
| SEQ ID NO. 630 | | | AAF73075.1 | AF268595 | Hordeum vulgare |
| AAD50592.1 | AF093752 | Triticum aestivum | SEQ ID NO. 635 | | |
| AAG22095.1 | AF308658 | Typha latifolia | CAB85467.1 | AJ250316 | Brassica juncea |
| SEQ ID NO. 632 | | | BAA22441.1 | D63954 | Zea mays |
| AAF21901.1 | AF109392 | Brassica napus | BAA11475.1 | D79979 | Nicotiana tabacum |
| SEQ ID NO. 633 | | | AAAF70334.1 | U25817 | Sesamum indicum |
| CAB82852.1 | Z30329 | Mesembryanthemum crystallinum | AAAB39387.1 | U59477 | Perilla frutescens |
| BAB18105.1 | AB042715 | Chlamydomonas reinhardtii | CAA07638.1 | AJ007739 | Solanum tuberosum |
| BAB18104.1 | AB042714 | Chlamydomonas reinhardtii | AAF27933.1 | AF222989 | Capsicum annuum |
| BAA83689.1 | AB011968 | Oryza sativa | AAB72241.1 | U75745 | Petroselinum crispum |
| BAA83688.1 | AB011967 | Oryza sativa | AAAG1776.1 | L22965 | Chloroplast Glycine soja |
| CAA73067.1 | Y12464 | Sorghum bicolor | AAF12821.1 | AF200717 | Vernicia fordii |
| AAF22219.1 | AF141378 | Zea mays | AAAB6690.1 | U17063 | Limnanthes douglasii |
| BAA96628.1 | AP002482 | Oryza sativa | AAAD13527.1 | AF061027 | Vernicia fordii |
| CAA89202.1 | Z49233 | Chlamydomonas eugametos | BAA22442.1 | D84409 | Zea mays |
| CAA73068.1 | Y12465 | Sorghum bicolor | BAA22440.1 | D63953 | Zea mays |
| BAA34675.1 | AB011670 | Triticum aestivum | BAA07785.2 | D43688 | Triticum aestivum |
| AAF06969.1 | AF162661 | Kalanchoe fedtschenkoi | AAA61774.1 | L22963 | Chloroplast Brassica napus |
| AAF06970.1 | AF162662 | Kalanchoe fedtschenkoi | AAC98967.1 | AF047172 | Vernicia fordii |
| BAA90814.1 | AP001168 | Oryza sativa | CAB45155.1 | AJ011004 | Vernicia fordii |
| AAB62693.1 | AF004947 | Oryza sativa | AAC16443.1 | AF020204 | Pelargonium x hortorum |
| AAF21062.1 | AF216527 | Dunaliella tertiolecta | AAA61775.1 | L22962 | Brassica napus |
| CAA71142.1 | Y10036 | Cucumis sativus | AAA61777.1 | L22964 | Chloroplast Glycine soja |
| | | | AAA32994.1 | L01418 | Brassica napus |
| | | | AAD15744.1 | AF047039 | Perilla frutescens |
| | | | BAA28358.1 | D84678 | Triticum aestivum |

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| BAA05515.1 | D26509 | Nicotiana tabacum | CAA57425.1 | X81831 | Zea mays |
| BAA11397.1 | D78506 | Oryza sativa | CAA72196.1 | Y11368 | Zea mays |
| BAB18135.1 | AB051215 | Glycine max | AAG44132.1 | AF218296 | Pisum sativum |
| BAA22439.1 | D63952 | Zea mays | AAG14962.1 | AF214008 | Brassica napus |
| BAA11396.1 | D78505 | Oryza sativa | AAG14961.1 | AF214007 | Brassica napus |
| CAB71341.1 | AJ250664 | Hordeum vulgare | AAD56282.1 | AF155332 | Petunia x hybrida |
| AAD48897.1 | AF083613 | Dunaliella salina | | | |
| AAF80560.1 | AF192486 | Sesamum indicum | SEQ ID NO. 639 | | |
| CAB64256.1 | AJ245938 | Calendula officinalis | BAB20580.1 | AB042267 | Zea mays |
| AAB80696.1 | U86072 | Petroselinum crispum | BAB20579.1 | AB042261 | Zea mays |
| | | | BAB20581.1 | AB042268 | Zea mays |
| | | | AAK14395.1 | AF339732 | Dianthus caryophyllus |
| SEQ ID NO. 636 | | | BAA85113.1 | AB031012 | Zea mays |
| AAB16830.1 | U49388 | Zea mays | BAA82873.1 | AB024291 | Zea mays |
| AAB16829.1 | U49387 | Triticum aestivum | BAA85112.1 | AB031011 | Zea mays |
| | | | BAA75253.1 | AB004882 | Zea mays |
| SEQ ID NO. 638 | | | BAB17300.1 | AB042260 | Zea mays |
| AAA19701.1 | I24438 | Thlaspi arvense | BAB20582.1 | AB042269 | Zea mays |
| AAA32913.1 | M32885 | Persea americana | BAB41137.1 | AB060130 | Zea mays |
| AAC39318.1 | AF029858 | Sorghum bicolor | | | |
| BAB40323.1 | AB037244 | Asparagus officinalis | SEQ ID NO. 640 | | |
| BAB40324.1 | AB037245 | Asparagus officinalis | AAG43550.1 | AF211532 | Nicotiana tabacum |
| AAB94589.1 | AF022460 | Glycine max | BAA78746.1 | AB023482 | Oryza sativa |
| CAA70575.1 | Y09423 | Nepeta racemosa | BAA96875.1 | AB045121 | Oryza sativa |
| CAA70576.1 | Y09424 | Nepeta racemosa | BAA90357.1 | AP001080 | Oryza sativa |
| AAB94588.1 | AF022459 | Glycine max | BAA77204.1 | AB026262 | Cicer arietinum |
| CAA50312.1 | X70981 | Solanum melongena | BAA90806.1 | AP001168 | Oryza sativa |
| AAB94584.1 | AF022157 | Glycine max | | | |
| AAD47832.1 | AF166332 | Nicotiana tabacum | SEQ ID NO. 642 | | |
| AAF27282.1 | AF122821 | Capsicum annuum | AAD39991.1 | AF150084 | Malus x domestica |
| CAA83941.1 | Z33875 | Mentha x piperita | AAD39992.1 | AF150085 | Brassica rapa |
| CAB56503.1 | AJ238612 | Catharanthus roseus | | | |
| CAA50645.1 | X71654 | Solanum melongena | SEQ ID NO. 644 | | |
| BAA03635.1 | D14990 | Solanum melongena | CAA47099.1 | X66469 | Medicago sativa |
| AAD44151.1 | AF124816 | Mentha x piperita | AAB41548.1 | L07042 | Medicago sativa |
| AAD44150.1 | AF124815 | Mentha spicata | CAA58761.1 | X83880 | Nicotiana tabacum |
| AAD44152.1 | AF124817 | Mentha x piperita | CAA50036.1 | X70703 | Pisum sativum |
| CAC27827.1 | AJ295719 | Catharanthus roseus | BAA74734.1 | AB016802 | Zea mays |
| AAB94587.1 | AF022458 | Glycine max | AAF81420.1 | AF247136 | Capsicum annuum |
| AAD37433.1 | AF150881 | Lycopersicon esculentum x | AAB58396.1 | U94192 | Nicotiana tabacum |
| Lycopersicon peruvianum | | | AAF65766.1 | AF242308 | Euphorbia esula |
| AAG14963.1 | AF214009 | Brassica napus | | | |

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| AAF73236.1 | AAF53061 | Pisum sativum | BAB40709.1 | AB003037 | Nicotiana tabacum |
| CAA57721.1 | X82270 | Medicago sativa | BAB40702.1 | AB053091 | Nicotiana tabacum |
| CAA73323.1 | Y12785 | Petroselinum crispum | CAA55326.1 | X78589 | Chlamydomonas reinhardtii |
| BAA09600.1 | D61377 | Nicotiana tabacum | BAB19066.1 | AP002744 | Oryza sativa |
| AAD37790.1 | AF149424 | Ipomoea batatas | BAB40710.1 | AB003038 | Nicotiana tabacum |
| CAA56314.1 | X79993 | Avena sativa | AAG13527.1 | AC068924 | Oryza sativa |
| AAF81419.1 | AF247135 | Capsicum annuum | AAF78897.1 | AF210816 | Oryza sativa subsp. japoni |
| AAC28850.1 | AF079318 | Triticum aestivum | BAB40707.1 | AB053096 | Nicotiana tabacum |
| AAK01710.1 | AF332873 | Oryza sativa | BAB40700.1 | AB053089 | Nicotiana tabacum |
| AAG40579.1 | AF216315 | Oryza sativa | BAB40701.1 | AB053090 | Nicotiana tabacum |
| CAC13967.1 | AJ250311 | Oryza sativa | BAB40704.1 | AB053093 | Nicotiana tabacum |
| BAA74733.1 | AB016801 | Zea mays | BAB40705.1 | AB053094 | Nicotiana tabacum |
| BAB32406.1 | AB055515 | Nicotiana tabacum | BAB40706.1 | AB053095 | Nicotiana tabacum |
| CAA58760.1 | X83879 | Nicotiana tabacum | BAB40708.1 | AB053097 | Nicotiana tabacum |
| CAA57719.1 | X82268 | Medicago sativa | BAB40703.1 | AB053092 | Nicotiana tabacum |
| CAB37188.1 | AJ224336 | Medicago sativa | SEQ ID NO. 647 | | |
| BAB18271.1 | AB035141 | Chlamydomonas reinhardtii | BAA78764.1 | AB023482 | Oryza sativa |
| CAA49592.1 | X69971 | Nicotiana tabacum | AAK11674.1 | AF339747 | Lophopyrum elongatum |
| AAF73257.1 | AF154329 | Pisum sativum | AAF43496.1 | AF131222 | Lophopyrum elongatum |
| CAA58466.1 | X83440 | Petunia x hybrida | AAG16628.1 | AY007545 | Brassica napus |
| AAF61238.1 | AF241166 | Oryza sativa | BAA94509.1 | AB041503 | Populus nigra |
| AAG40581.1 | AF216317 | Oryza sativa | BAA94510.1 | AB041504 | Populus nigra |
| AAG40580.1 | AF216316 | Oryza sativa | CAB51834.1 | 00069 | Oryza sativa |
| CAB61889.1 | AJ251330 | Oryza sativa | AAK21965.1 | AY028699 | Brassica napus |
| AAF23902.1 | AF194415 | Oryza sativa | AAG03090.1 | AC073405 | Oryza sativa |
| AAD52659.1 | AF177392 | Oryza sativa | AAG25966.1 | AF302082 | Nicotiana tabacum |
| AAF23903.1 | AF194416 | Oryza sativa | AAC61805.1 | U28007 | Lycopersicon esculentum |
| AAD28617.1 | AF129087 | Medicago sativa | AAB09771.1 | U67422 | Zea mays |
| CAB61750.1 | AJ275316 | Cicer arietinum | AAC27894.1 | AF023164 | Zea mays |
| AAD51717.1 | AF174291 | Ipomoea batatas | AAB61708.1 | U93048 | Daucus carota |
| AAB57843.1 | U96716 | Selaginella lepidophylla | AAF91336.1 | AF249317 | Glycine max |
| BAA33152.1 | AB008187 | Pisum sativum | AAF91337.1 | AF249318 | Glycine max |
| CAA76701.1 | Y17226 | Lycopersicon esculentum | AAC33377.1 | AF290411 | Oryza meyeriana |
| CAA66233.1 | X97637 | Antirrhinum majus | AAC27895.1 | AF023165 | Zea mays |
| CAA71242.1 | Y10160 | Chenopodium rubrum | AAK11566.1 | AF318490 | Lycopersicon hirsutum |
| SEQ ID NO. 646 | | | CAA97692.1 | Z73295 | Catharanthus roseus |
| AAB37756.1 | L46702 | Solanum tuberosum | AAF34428.1 | AF172282 | Oryza sativa |
| AAC49393.1 | U52078 | Nicotiana tabacum | AAF76306.1 | AF220602 | Lycopersicon pimpinellifolium |
| AAG13460.1 | AF223412 | Zea mays | AAB47423.1 | U59315 | Lycopersicon pimpinellifolium |
| BAB03437.1 | AP002817 | Oryza sativa | AAC48914.1 | U02271 | Lycopersicon pimpinellifolium |

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| AAK11567.1 | AF318491 | Lycopersicon hirsutum | AA02328.1 | AF044573 | Brassica oleracea |
| AAB47421.1 | U59316 | Lycopersicon esculentum | AAB38514.1 | U81049 | Pisum sativum |
| AAF76313.1 | AF220603 | Lycopersicon esculentum | AAB18644.1 | U76193 | Pisum sativum |
| AAE66615.1 | AF142596 | Nicotiana tabacum | AAC05272.1 | AF049106 | Glycine max |
| BAA92954.1 | AP001551 | Oryza sativa | CAA33873.1 | X15864 | Oryza sativa |
| BAA92953.1 | AP001551 | Oryza sativa | AAC16055.1 | AF061020 | Mesostigma viride |
| | | | AAB33940.1 | J01297 | Glycine max |
| SEQ ID NO. 649 | | | BAA09450.1 | D50839 | Chlamydomonas reinhardtii |
| AA03741.1 | AF111812 | Brassica napus | BAA09449.1 | D50838 | Chlamydomonas reinhardtii |
| AA041039.1 | AF112538 | Malva pusilla | AAC64126.1 | AF091808 | Anemia phyllitidis |
| AAG10041.1 | AF288226 | Setaria italica | AAA33433.1 | J01238 | Zea mays |
| BAA89214.1 | AB032361 | Mimosa pudica | CRA23728.1 | V00450 | Glycine max |
| AAF03692.1 | AF172094 | Picea rubens | CAA33871.1 | X15862 | Oryza sativa |
| AAF82805.1 | AF282624 | Helianthus annuus | AAA34243.1 | M33963 | Volvox carteri |
| AAF71265.1 | AF246715 | Phalaenopsis sp. 'True Lady' | AAD48335.1 | AF090969 | Selaginella apoda |
| AAC31886.1 | AF059484 | Gossypium hirsutum | AAD48334.1 | AF090968 | Selaginella apoda |
| CAA39280.1 | X55751 | Solanum tuberosum | CAA39276.1 | X55746 | Solanum tuberosum |
| AAC49652.1 | U68462 | Striga asiatica | | | |
| AAC49651.1 | U68461 | Striga asiatica | SEQ ID NO. 650 | | |
| AAF31643.1 | AF143208 | Vigna radiata | BAA33803.1 | AB018412 | Populus nigra |
| CRA47899.1 | X67666 | Pisum sativum | CAA88841.1 | Z48977 | Nicotiana tabacum |
| CAA45149.1 | X63603 | Nicotiana tabacum | AAC26785.1 | AF073473 | Solanum tuberosum |
| CAA39281.1 | X55752 | Solanum tuberosum | CAA51931.1 | X73528 | Triticum aestivum |
| CAA48609.1 | X68649 | Pisum sativum | CAA33303.1 | X15233 | Triticum aestivum |
| CNA39278.1 | X55749 | Solanum tuberosum | BAA33802.1 | AB018411 | Populus nigra |
| AAF71264.1 | AF246714 | Phalaenopsis sp. 'True Lady' | CAA48479.1 | X68430 | Spinacia oleracea |
| AAB38512.1 | U81047 | Pisum sativum | AAF85975.1 | AF275639 | Pisum sativum |
| AAB38511.1 | U81046 | Pisum sativum | CAA33302.1 | X15232 | Triticum aestivum |
| AAB18642.1 | U76191 | Pisum sativum | BAA33801.1 | AB018410 | Populus nigra |
| AAB18641.1 | U76190 | Pisum sativum | CAA88840.1 | Z48976 | Nicotiana tabacum |
| CAA62028.1 | X90378 | Pisum sativum | AAD55564.1 | AF110782 | Volvox carteri f. nagariensis |
| AAC64127.1 | AF091809 | Anemia phyllitidis | AAA70082.1 | U14912 | Chlamydomonas reinhardtii |
| CAA33874.1 | X15865 | Oryza sativa | BAA21478.1 | AB005551 | Robinia pseudoacacia |
| AAF40438.1 | AF234528 | Avena nuda | AAC32142.1 | AF051241 | Picea mariana |
| AAC64128.1 | AF091810 | Anemia phyllitidis | AAA86837.1 | U44801 | Avena sativa |
| CAA55923.1 | X79378 | Sorghum bicolor | | | |
| AAC16054.1 | AF061019 | Coleochaete scutata | SEQ ID NO. 654 | | |
| CAA34356.1 | X16280 | Oryza sativa | CAC15504.1 | AJ297917 | Lycopersicon esculentum |
| CAA39279.1 | X55750 | Solanum tuberosum | CAA66236.1 | X97640 | Antirrhinum majus |
| AAC16053.1 | AF061018 | Scherffelia dubia | BAA90814.1 | AP001168 | Oryza sativa |
| AAF87302.1 | AF281323 | Magnolia denudata | AAF19401.1 | AF203479 | Glycine max |

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| BAA96628.1 | AP002482 | Oryza sativa | CAB56503.1 | AJ238612 | Catharanthus roseus |
| AAD23582.1 | AF128443 | Glycine max | AAD47832.1 | AF166332 | Nicotiana tabacum |
| BAA05649.1 | D26602 | Nicotiana tabacum | CAA50645.1 | X71654 | Solanum melongena |
| AAF05112.1 | AF158091 | Mesembryanthemum crystallinum | BAA03635.1 | D14990 | Solanum melongena |
| CAA65244.1 | X95997 | Solanum tuberosum | CAA50312.1 | X70981 | Solanum melongena |
| CAA86286.1 | Z38126 | Malus x domestica | AAG44132.1 | AF218296 | Pisum sativum |
| CAA71142.1 | Y10036 | Cucumis sativus | AAD44151.1 | AF124816 | Mentha x piperita |
| CAA78961.1 | Z17313 | Malus x domestica | CAA70576.1 | Y09424 | Nepeta racemosa |
| CAA89202.1 | Z49233 | Chlamydomonas eugametos | CAA65580.1 | X96784 | Nicotiana tabacum |
| CAA57898.1 | X82548 | Hordeum vulgare | AAD44150.1 | AF124815 | Mentha spicata |
| AAF21062.1 | AF216527 | Dunaliella tertiolecta | AAD44152.1 | AF124817 | Mentha x piperita |
| BAA19573.1 | AB002109 | Oryza sativa | CAA83941.1 | Z33875 | Mentha x piperita |
| CAC08564.1 | AJ295939 | Medicago sativa | CAA64635.1 | X95342 | Nicotiana tabacum |
| CRA73068.1 | Y12465 | Sorghum bicolor | CAA57423.1 | X81829 | Zea mays |
| CRA73067.1 | Y12464 | Sorghum bicolor | CAA72208.1 | Y11404 | Zea mays |
| CAA08997.1 | AJ010093 | Brassica napus | AAG14963.1 | AF214009 | Brassica napus |
| CAA48473.1 | X68410 | Medicago sativa | AAG14962.1 | AF214008 | Brassica napus |
| CAA10288.1 | AJ131048 | Cicer arietinum | AAG14961.1 | AF214007 | Brassica napus |
| AAB88537.1 | AF035944 | Fragaria x ananassa | AAC32274.1 | AF081575 | Petunia x hybrida |
| AAG60195.1 | AC084763 | Oryza sativa | SEQ ID NO. 657 | | |
| BAA13608.1 | D88399 | Oryza sativa | BAB21153.1 | AP002899 | Oryza sativa |
| BAB40983.1 | AB059621 | Oryza sativa | BAA94219.1 | AP001633 | Oryza sativa |
| BAA92214.1 | AP001278 | Oryza sativa | AAC49181.1 | U39289 | Brassica napus |
| AAD37166.1 | AF132743 | Oryza sativa | BAA94236.1 | AP001633 | Oryza sativa |
| CAA11861.1 | AJ224164 | Petunia x hybrida | BAA94228.1 | AP001633 | Oryza sativa |
| CAA58595.1 | X83620 | Petunia x hybrida | BAA94224.1 | AP001633 | Oryza sativa |
| AAF23900.1 | AF194413 | Oryza sativa | BAA94215.1 | AP001633 | Oryza sativa |
| AAB66608.1 | AF012889 | Zea mays | AAC49182.1 | U39319 | Brassica napus |
| AAB05457.1 | U55768 | Oryza sativa | SEQ ID NO. 667 | | |
| SEQ ID NO. 655 | | | AAF91323.1 | AF244889 | Glycine max |
| AAA32913.1 | M32885 | Persea americana | CAC20842.1 | AJ250467 | Pinus sylvestris |
| AAC39318.1 | AF029858 | Sorghum bicolor | AAB36558.1 | U77888 | Ipomoea nil |
| AAA19701.1 | I24438 | Thlaspi arvense | AAF91322.1 | AF244888 | Glycine max |
| BAB40323.1 | AB037244 | Asparagus officinalis | AAF91324.1 | AF244890 | Glycine max |
| BAB40324.1 | AB037245 | Asparagus officinalis | AAC36318.1 | AF053127 | Malus x domestica |
| AAB94588.1 | AF022459 | Glycine max | AAF59906.1 | AF197947 | Glycine max |
| AAB94589.1 | AF022460 | Glycine max | AAF59905.1 | AF197946 | Glycine max |
| CAA70575.1 | Y09423 | Nepeta racemosa | BAA83373.1 | AP000391 | Oryza sativa |
| AAF27282.1 | AF122821 | Capsicum annuum | BAA84787.1 | AP000559 | Oryza sativa |
| AAB94584.1 | AF022157 | Glycine max | | | |

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| AA65162.1 | AF02667 | Solanum commersonii | CAA29123.1 | X05636 | Pisum sativum |
| CAA47345.1 | X66874 | Phaseolus vulgaris | CAA73171.1 | Y12599 | Apium graveolens |
| AA91472.1 | AF035457 | Spinacia oleracea | BAA8671.1 | AB029614 | Nicotiana tabacum |
| AA91473.1 | AF035458 | Spinacia oleracea | AAK29450.1 | AF352247 | Pisum sativum |
| AA96660.1 | AF039084 | Spinacia oleracea | AAK29449.1 | AF352246 | Pisum sativum |
| | | | AAK29451.1 | AF352248 | Pisum sativum |
| | | | AAK29456.1 | AF352253 | Lens culinaris |
| SEQ ID NO. 676 | | Vicia faba | AAK29454.1 | AF352251 | Lens culinaris |
| AAF78062.1 | AF266760 | Raphanus sativus | CAA12232.1 | AJ224933 | Lycopersicon esculentum |
| BAA32777.1 | AB012044 | Brassica oleracea | AAK29455.1 | AF352252 | Lens culinaris |
| CAA64895.1 | X95639 | Raphanus sativus | AAA50578.1 | U03391 | Lycopersicon esculentum |
| BAA92258.1 | AB030695 | Brassica oleracea | AAF27930.1 | AF222804 | Euphorbia esula |
| CAA64896.1 | X95640 | Raphanus sativus | AAD41007.1 | AF107024 | Triticum aestivum |
| BAA92259.1 | AB030696 | Vitis vinifera | CAA40362.1 | X57077 | Zea mays |
| AAF80556.1 | AF188843 | Zea mays | BAA87331.1 | AB012694 | Lilium longiflorum |
| AAD29676.1 | AF131201 | Oryza sativa | AA86857.1 | AF031547 | Fritillaria agrestis |
| CAA11896.1 | AJ224327 | Zea mays | CAA07233.1 | AJ006767 | Cicer arietinum |
| AAK26755.1 | AF326488 | Zea mays | AAA50303.1 | L34578 | Pisum sativum |
| AAK26754.1 | AF326487 | Zea mays | AAD41005.1 | AF107022 | Triticum aestivum |
| CAA04652.1 | AJ001292 | Craterostigma planiagineum | AAA74723.1 | L07946 | Volvox carteri |
| AAF80557.1 | AF188844 | Vitis vinifera | CAA77867.1 | Z11842 | Lycopersicon esculentum |
| AA81601.1 | AF024511 | Nicotiana tabacum | AA803076.1 | U01890 | Lycopersicon pennellii |
| CAA54233.1 | X76911 | Hordeum vulgare | AAF64525.1 | AF253416 | Lycopersicon chilense |
| CAA52068.1 | X73848 | Lycopersicon esculentum | | | |
| BAB40142.1 | AB058679 | Pyrus communis | SEQ ID NO. 680 | | |
| CAC33802.1 | AJ271796 | Zea mays | AA88134.1 | AF034618 | Spinacia oleracea |
| AAK26756.1 | AF326489 | Zea mays | AAF34134.1 | AF161180 | Malus x domestica |
| AA67870.1 | U60149 | Beta vulgaris | AA899745.1 | AF005993 | Triticum aestivum |
| AA82140.1 | AF022737 | Oryza sativa | AAA21808.1 | L23551 | Spinacia oleracea |
| CAA11025.1 | AJ222973 | Lupinus albus | AAA34139.1 | L08830 | Lycopersicon esculentum |
| CAB46350.1 | Y18311 | Solanum tuberosum | AA86942.1 | AF031241 | Glycine max |
| | | | AAK21920.1 | AF338252 | Glycine max |
| SEQ ID NO. 677 | | Oryza sativa | AA891473.1 | AF035458 | Spinacia oleracea |
| BAA90487.1 | AB037681 | Triticum aestivum | AA896660.1 | AF039084 | Spinacia oleracea |
| CAA67191.1 | X98582 | Triticum aestivum | AA891472.1 | AF035457 | Spinacia oleracea |
| AAD11549.1 | U55859 | Lycopersicon esculentum | SEQ ID NO. 681 | | |
| AA30456.1 | AF123259 | | CAA71801.1 | Y10848 | Brassica juncea |
| | | | AA871230.1 | AF017983 | Lycopersicon esculentum |
| SEQ ID NO. 678 | | Lathyrus sativus | CAA06613.1 | AJ005587 | Brassica juncea |
| AAK29453.1 | AF352250 | Lathyrus sativus | AA813459.1 | AF128453 | Glycine max |
| AAK29452.1 | AF352249 | Nicotiana tabacum | | | |
| AA41651.1 | L29456 | | | | |

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| CAA64808.1 | X95563 | Brassica juncea | CAA62225.1 | X90692 | Medicago sativa |
| SEQ ID NO. 682 | | | AA65636.1 | L13653 | Lycopersicon esculentum |
| CAA09881.1 | AJ011939 | Trifolium repens | AAF5464.2 | AF247700 | Oryza sativa |
| CAA62228.1 | X90695 | Medicago sativa | BAA01877.1 | D11102 | Populus kitakamiensis |
| AAB41812.1 | L36158 | Medicago sativa | BAA07664.1 | D42065 | Nicotiana tabacum |
| CAA71495.1 | Y10469 | Spinacia oleracea | AAA32973.1 | M73234 | Hordeum vulgare |
| BAA77387.1 | AB024437 | Scutellaria baicalensis | CAA71488.1 | Y10462 | Spinacia oleracea |
| AAA98491.1 | L36981 | Petroselinum crispum | BAA07663.1 | D42064 | Nicotiana tabacum |
| CAA62226.1 | X90693 | Medicago sativa | SEQ ID NO. 683 | | |
| CAB94692.1 | AJ242742 | Ipomoea batatas | BAA04511.1 | D17587 | Oryza sativa |
| CAA62227.1 | X90694 | Medicago sativa | BAA01757.1 | D10985 | Oryza sativa |
| AAD11481.1 | U51191 | Glycine max | CAA70817.1 | Y09604 | Hordeum vulgare |
| CAC21393.1 | AJ401276 | Zea mays | AAD42963.2 | AF141384 | Matricaria chamomilla |
| AAF63024.1 | AF244921 | Spinacia oleracea | CAB71127.1 | AJ271659 | Cicer arietinum |
| CAB67121.1 | Y19023 | Lycopersicon esculentum | CAA92216.1 | Z68130 | Pisum sativum |
| CAA50597.1 | X71593 | Lycopersicon esculentum | AAA92064.1 | U49741 | Vigna radiata |
| BAA01950.1 | D11337 | Vigna angularis | BAA94235.1 | AP001633 | Oryza sativa |
| AAD11483.1 | U51193 | Glycine max | AAA92062.1 | U49382 | Vigna radiata |
| AAD11482.1 | U51192 | Glycine max | CAB59202.1 | X78878 | Hordeum vulgare |
| AAD37376.1 | AF145350 | Glycine max | BAB19126.1 | AP002839 | Oryza sativa |
| AAB41811.1 | L36157 | Medicago sativa | BAB08188.1 | AP002539 | Oryza sativa |
| AAC49818.1 | AF014467 | Oryza sativa | AAF64227.1 | AF248647 | Lycopersicon pennellii |
| AAC98519.1 | AF007211 | Glycine max | AAF44708.1 | AF242849 | Lycopersicon esculentum |
| CAA46916.1 | X66125 | Oryza sativa | CAA70815.1 | Y09602 | Hordeum vulgare |
| CAA80502.1 | Z22920 | Spirodela polyrrhiza | CAA70816.1 | Y09603 | Hordeum vulgare |
| CAA66037.1 | X97351 | Populus balsamifera subsp. trichocarpa | AAD01264.1 | AF006079 | Solanum berthaultii |
| AAD37430.1 | AF149280 | Phaseolus vulgaris | CAA55478.1 | X78877 | Hordeum vulgare |
| BAA96643.1 | AP002482 | Oryza sativa | AAD01265.1 | AF006080 | Solanum berthaultii |
| AAD11484.1 | U51194 | Glycine max | AAD01263.1 | AF006078 | Solanum berthaultii |
| BAA03911.1 | D16442 | Oryza sativa | BAA04510.1 | D17586 | Oryza sativa |
| CAA71490.1 | Y10464 | Spinacia oleracea | AAD22150.1 | AF061282 | Sorghum bicolor |
| CAA39486.1 | X56011 | Triticum aestivum | AAA32940.1 | J03897 | Hordeum vulgare |
| AAF63027.1 | AF244924 | Spinacia oleracea | AAD22151.1 | AF061282 | Sorghum bicolor |
| AAC49821.1 | AF014470 | Oryza sativa | AAD22164.1 | AF061282 | Sorghum bicolor |
| CAA59485.1 | X85228 | Triticum aestivum | CAB58992.1 | X78876 | Hordeum vulgare |
| BAA06335.1 | D30653 | Populus kitakamiensis | SEQ ID NO. 684 | | |
| CAA59487.1 | X85230 | Triticum aestivum | AAB97311.1 | AF008597 | Catharanthus roseus |
| AAD37427.1 | AF149277 | Phaseolus vulgaris | AAC49827.1 | U71605 | Catharanthus roseus |
| CAA62597.1 | X91172 | Raphanus sativus | AAC49826.1 | U71604 | Catharanthus roseus |

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| CAA54557.1 | X77368 | Solanum melongena | SEQ ID NO. 695 | AAF29773.1 | AF159229 | Gossypium hirsutum |
| AAC95363.1 | AF104925 | Solanum chacoense | | AAF22517.1 | AF118924 | Papaver somniferum |
| CAA55628.1 | X78994 | Medicago sativa | | AAF22518.1 | AF118925 | Papaver somniferum |
| BAA95828.1 | AF002069 | Oryza sativa | | AAF22519.1 | AF118926 | Papaver somniferum |
| BAA21897.1 | D83041 | Ipomoea nil | | AG34795.1 | AF243360 | Glycine max |
| CAA43027.1 | X60512 | Petunia x hybrida | | AG34839.1 | AF244696 | Zea mays |
| BBA37127.1 | AB012203 | Lactuca sativa | | AG34842.1 | AF244699 | Zea mays |
| ARC49929.1 | AF022142 | Petunia x hybrida | | AG34830.1 | AF244687 | Zea mays |
| CAA49353.1 | X69664 | Malus sp. | | AG34846.1 | AF244703 | Zea mays |
| SEQ ID NO. 685 | | | | CAA09188.1 | AJ010449 | Alopecurus myosuroides |
| CAA04511.1 | AJ001061 | Vitis vinifera | | AAD10129.1 | AF004358 | Aegilops tauschii |
| CAA70777.1 | Y09590 | Vitis vinifera | | AG34850.1 | AF244707 | Zea mays |
| AAB06594.1 | U38651 | Medicago truncatula | | AG34835.1 | AF244692 | Zea mays |
| CAA47324.1 | X66856 | Nicotiana tabacum | | AG34848.1 | AF244705 | Zea mays |
| BAB19864.1 | AB052885 | Oryza sativa | | CAA09187.1 | AJ010448 | Alopecurus myosuroides |
| BAB19863.1 | AB052884 | Oryza sativa | | CAA09189.1 | AJ010450 | Alopecurus myosuroides |
| CAB52689.1 | AJ132224 | Lycopersicon esculentum | | AG34845.1 | AF244702 | Zea mays |
| CAA09419.1 | AJ010942 | Lycopersicon esculentum | | AG34797.1 | AF243362 | Glycine max |
| CAB06079.1 | Z83829 | Picea abies | | AG34838.1 | AF244695 | Zea mays |
| BAB19862.1 | AB052883 | Oryza sativa | | AG34834.1 | AF244691 | Zea mays |
| CAA53192.1 | X75440 | Chlorella kessleri | | AG34809.1 | AF243374 | Glycine max |
| CAA39036.1 | X55349 | Chlorella kessleri | | AG34829.1 | AF244686 | Zea mays |
| CAA68813.1 | Y07520 | Chlorella kessleri | | AG34798.1 | AF243363 | Glycine max |
| CAB52688.1 | AJ132223 | Lycopersicon esculentum | | AG34837.1 | AF244694 | Zea mays |
| AAD55054.1 | AF173655 | Beta vulgaris | | AG34849.1 | AF244706 | Zea mays |
| CAB52690.1 | AJ132225 | Lycopersicon esculentum | | AG34803.1 | AF243368 | Glycine max |
| AG43998.1 | AF215837 | Apium graveolens var. dulce | | AG34833.1 | AF244690 | Zea mays |
| AAF74567.1 | AF215853 | Solanum tuberosum | | AG34801.1 | AF243366 | Glycine max |
| AAF74566.1 | AF215852 | Nicotiana tabacum | | AG34841.1 | AF244698 | Zea mays |
| AAF74568.1 | AF215854 | Zea mays | | AG34844.1 | AF244701 | Zea mays |
| AAF74565.1 | AF215851 | Spinacia oleracea | | AG34836.1 | AF244693 | Zea mays |
| SEQ ID NO. 686 | | | | AG34802.1 | AF243367 | Glycine max |
| AAB86939.1 | AF030387 | Oryza sativa | | AAC32118.1 | AF051214 | Picea mariana |
| AAC03032.1 | AF045033 | Zea mays | | AG34796.1 | AF243361 | Glycine max |
| AAB86937.1 | AF030385 | Zea mays | | AG34843.1 | AF244700 | Zea mays |
| SEQ ID NO. 690 | | | | AAF64450.1 | AF239928 | Euphorbia esula |
| AAF67002.1 | AF147726 | Zea mays | | AG34831.1 | AF244688 | Zea mays |
| AAB51150.1 | U91996 | Picea abies | | AG34847.1 | AF244704 | Zea mays |
| | | | | AG34840.1 | AF244697 | Zeamays |

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| SEQ ID NO. 696 | AAK27801.1 | AC022457 | Oryza sativa | BAA03763.1 | D16247 | Nicotiana sylvestris |
| AAC78102.1 | AF093630 | | Oryza sativa | AAF75791.1 | AF271892 | Pisum sativum |
| | | | | AAF40306.1 | AF156667 | Vigna radiata |
| | | | | CAA68193.1 | X99937 | Spinacia oleracea |
| SEQ ID NO. 697 | AAF89209.1 | AF279252 | Vigna radiata | AAD20980.1 | AF079782 | Zea mays |
| AAB17070.1 | U54770 | | Lycopersicon esculentum | BAA95705.1 | AB042644 | Oryza sativa |
| AAG41777.1 | AF212991 | | Cucurbita maxima | BAA95704.1 | AB042643 | Oryza sativa |
| AAK00946.1 | AF318211 | | Taxus cuspidata | AAG48833.1 | AC084218 | Oryza sativa |
| AAK11616.1 | AF326277 | | Hordeum vulgare | | | |
| AAF20011.1 | AF216313 | | Helianthus annuus | SEQ ID NO. 701 | | |
| BAB40322.1 | AB036772 | | Triticum aestivum | AAB62580.1 | U63298 | Pisum sativum |
| AAF45142.1 | AF195818 | | Glycine max | AAC49665.1 | U83707 | Lycopersicon esculentum |
| AAF34533.1 | AF195812 | | Pisum sativum | SEQ ID NO. 704 | | |
| AAD44150.1 | AF124815 | | Mentha spicata | AAA33443.1 | L15390 | Zea mays |
| AAF34538.1 | AF195817 | | Beta vulgaris | BAA13232.1 | D87042 | Zea mays |
| AAF34536.1 | AF195815 | | Trifolium repens | AAB49984.1 | U90262 | Cucurbita pepo |
| AAF27282.1 | AF122821 | | Capsicum annuum | BAA12338.1 | D84408 | Zea mays |
| AAF34525.1 | AF195804 | | Lens culinaris | AAB70706.1 | U82087 | Tortula ruralis |
| AAB38929.1 | AF135484 | | Glycine max | CAA07481.1 | AJ007366 | Zea mays |
| AAB94593.1 | AF022464 | | Glycine max | AAB80692.1 | U69173 | Glycine max |
| AAF34527.1 | AF195806 | | Vigna radiata | AAC49405.1 | U08140 | Vigna radiata |
| CAA70575.1 | Y09423 | | Nepeta racemosa | BAA85396.1 | AP000615 | Oryza sativa |
| AAF34530.1 | AF195809 | | Vigna radiata | CAA57156.1 | X81393 | Oryza sativa |
| AAF34535.1 | AF195814 | | Trifolium repens | AAC05270.1 | AF048691 | Oryza sativa |
| AAF34532.1 | AF195811 | | Trifolium pratense | BAA81749.1 | AB017515 | Marchantia polymorpha |
| AAF34529.1 | AF195808 | | Vigna radiata | BAA81751.1 | AB017517 | Marchantia polymorpha |
| AAD44151.1 | AF124816 | | Mentha x piperita | BAA81750.1 | AB017516 | Marchantia polymorpha |
| AAF34531.1 | AF195810 | | Trifolium pratense | BAA81748.1 | AB017515 | Marchantia polymorpha |
| BAA76380.1 | AB023636 | | Glycyrrhiza echinata | CAA57157.1 | X81394 | Oryza sativa |
| AAF45143.1 | AF195819 | | Glycine max | AAC25423.1 | AF072908 | Nicotiana tabacum |
| AAF34528.1 | AF022462 | | Vigna radiata | BAA12715.1 | D85039 | Zea mays |
| AAB94591.1 | AF022462 | | Glycine max | CAA65500.1 | X96723 | Medicago sativa |
| BAB40323.1 | AB037244 | | Asparagus officinalis | AAA69507.1 | U28376 | Zea mays |
| BAB40324.1 | AB037245 | | Asparagus officinalis | AAB80693.1 | U69174 | Glycine max |
| AAF34534.1 | AF195813 | | Lupinus albus | BAA02698.1 | D13436 | Oryza sativa |
| CAB56742.1 | AJ249800 | | Cicer arietinum | AAD17800.1 | AF090835 | Mesembryanthemum crystallinum |
| AAF34526.1 | AF195805 | | Lens culinaris | AAG46110.1 | AC073166 | Oryza sativa |
| | | | | AAD28192.2 | AF115406 | Solanum tuberosum |
| | | | | BAA13440.1 | D87707 | Ipomoea batatas |
| SEQ ID NO. 699 | | | | AAA61682.1 | L27484 | Zea mays |

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| CAA39936.1 | X56599 | Daucus carota | CAA87385.1 | 247076 | Malus x domestica |
| AAK26164.1 | AY027885 | Cucumis sativus | CAA07470.1 | AJ007332 | Catharanthus roseus |
| AAB88537.1 | AF035944 | Fragaria x ananassa | CAA05491.1 | AJ002485 | Medicago sativa |
| AAF21062.1 | AF216527 | Dunaliella tertiolecta | CAA82263.1 | 228627 | Acetabularia cliftonii |
| CAA89202.1 | 249233 | Chlamydomonas eugametos | CAA56766.1 | X80788 | Medicago sativa subsp. x |
| AAF23900.1 | AF194413 | Oryza sativa | AAD38856.1 | AF156101 | Chlamydomonas reinhardtii |
| AAF23901.2 | AF194414 | Oryza sativa | CAB07803.1 | 293768 | Nicotiana tabacum |
| AAC78558.1 | AF030879 | Solanum tuberosum | CAA8254.1 | 248221 | Phaseolus vulgaris |
| CAB46228.1 | Y18055 | Arachis hypogaea | AAA33545.1 | M60215 | Zea mays |
| AAC32116.1 | AF051211 | Picea mariana | BAA92244.1 | AB038648 | Vicia faba |
| CAA58750.1 | X83869 | Daucus carota | CAB07804.1 | 293769 | Nicotiana tabacum |
| BAA12691.1 | D84507 | Zea mays | CAA05493.1 | AJ002487 | Medicago sativa |
| AAB47181.1 | S82324 | Zea mays | CAA82264.1 | 228632 | Acetabularia cliftonii |
| BAA22410.1 | D38452 | Zea mays | CAA45119.1 | X63558 | Brassica oleracea |
| BAA12692.1 | D84508 | Zea mays | CAA05492.1 | AJ002486 | Medicago sativa |
| AAG01179.1 | AF289237 | Zea mays | AAA74625.1 | U31773 | Oryza sativa |
| AAC24961.1 | AF009337 | Tradescantia virginiana | CAB07805.1 | 293770 | Nicotiana tabacum |
| BAA90814.1 | AP001168 | Oryza sativa | CAA05494.1 | AJ002488 | Medicago sativa |
| AAC49008.1 | U24188 | Lilium longiflorum | CAA40686.1 | X57438 | Brassica napus |
| AAF19403.1 | AF203481 | Lycopersicon esculentum | CAA87386.1 | 247077 | Malus x domestica |
| | | | CAA87387.1 | 247078 | Malus x domestica |
| SEQ ID NO. 705 | | | BAA92334.1 | AB038787 | Vicia faba |
| BAA92697.1 | AB039916 | Vicia faba | CAC11128.1 | AJ298828 | Fagus sylvatica |
| CAC11129.1 | AJ298829 | Fagus sylvatica | BAA92335.1 | AB038788 | Vicia faba |
| AAD09953.1 | AF107464 | Hevea brasiliensis | CAC09574.1 | AJ298986 | Fagus sylvatica |
| BAA92698.1 | AB039917 | Vicia faba | BAA92337.1 | AB038790 | Vicia faba |
| AAC72838.1 | AF097182 | Oryza sativa | BAA92336.1 | AB038789 | Vicia faba |
| AAD41126.1 | AF159061 | Oryza sativa subsp. indica | BAA92338.1 | AB038791 | Vicia faba |
| AAA91806.1 | U49113 | Oryza sativa | AAG29592.1 | AF196285 | Medicago sativa subsp. x varia |
| CAA81126.1 | 226041 | Helianthus annuus | SEQ ID NO. 706 | | |
| CAB07806.1 | 293771 | Nicotiana tabacum | CAA10104.1 | AJ012656 | Prunus persica |
| AAD48068.1 | AF173881 | Oryza sativa subsp. indica | CAA10103.1 | AJ012655 | Prunus persica |
| AAD22116.1 | AF134552 | Oryza sativa subsp. indica | CAA10102.1 | AJ012654 | Prunus persica |
| CAB46506.1 | AJ007496 | Nicotiana tabacum | CAA10101.1 | AJ012653 | Prunus persica |
| CAB07807.1 | 293772 | Nicotiana tabacum | CAA04565.1 | AJ001161 | Hordeum vulgare |
| CAA40687.1 | X57439 | Brassica napus | CAA57636.1 | X82124 | Zea mays |
| CAA49849.1 | X70399 | Medicago sativa | SEQ ID NO. 710 | | |
| BAA92699.1 | AB039918 | Vicia faba | AAF17236.1 | AF178976 | Zea mays |
| CAA07471.1 | AJ007333 | Catharanthus roseus | AAC26856.1 | AF069952 | Enteromorpha intestinalis |
| AAF86353.1 | AF283668 | Oryza sativa subsp. indica | | | |
| CAA81395.1 | 226654 | Acetabularia cliftonii | | | |

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| CAA66236.1 | X97640 | Antirrhinum majus | AAF91322.1 | AF244888 | Glycine max |
| BAB18271.1 | AB035141 | Chlamydomonas reinhardtii | AAK11674.1 | AF339747 | Lophopyrum elongatum |
| CAA66235.1 | X97639 | Antirrhinum majus | AAF43496.1 | AF131222 | Lophopyrum elongatum |
| CAA47099.1 | X66469 | Medicago sativa | AAB09771.1 | U67422 | Zea mays |
| AAB41548.1 | L07042 | Medicago sativa | CAC20842.1 | AJ250467 | Pinus sylvestris |
| BAA09600.1 | D61377 | Nicotiana tabacum | AAF59906.1 | AF197947 | Glycine max |
| SEQ ID NO. 735 | | | AAG25966.1 | AF302082 | Nicotiana tabacum |
| AAD16139.1 | AF096299 | Nicotiana tabacum | AAF59905.1 | AF197946 | Glycine max |
| CAA88326.1 | Z48429 | Avena fatua | AAB61708.1 | U93048 | Daucus carota |
| AAC49527.1 | U48831 | Petroselinum crispum | BAA94516.1 | AF001800 | Oryza sativa |
| AAC49529.1 | U58540 | Petroselinum crispum | CAB51834.1 | O0069 | Oryza sativa |
| AAC37515.1 | I44134 | Cucumis sativus | AAB36558.1 | U77888 | Ipomoea nil |
| AAD16138.1 | AF096298 | Nicotiana tabacum | AAG52994.1 | U77888 | Ipomoea nil |
| AAC49528.1 | U56834 | Petroselinum crispum | AAF66615.1 | AF142596 | Nicotiana tabacum |
| BAA77358.1 | AB020023 | Nicotiana tabacum | SEQ ID NO. 739 | | |
| CAA88331.1 | Z48431 | Avena fatua | AAB80804.1 | U90341 | Pinus radiata |
| CAB66338.1 | AJ279697 | Betula pendula | CAA62921.1 | X91811 | Oryza sativa |
| AAF61863.1 | AF193770 | Nicotiana tabacum | BAA29039.1 | AB015430 | Humulus lupulus |
| AAF61864.1 | AF193771 | Nicotiana tabacum | BAA36224.1 | AB004905 | Ipomoea purpurea |
| AAD27591.1 | AF121354 | Petroselinum crispum | BAA20387.1 | AB001826 | Ipomoea purpurea |
| BAA87069.1 | AB035271 | Matricaria chamomilla | AAG30295.1 | AF315345 | Hypericum androsaemum |
| SEQ ID NO. 737 | | | CAA71904.1 | Y11022 | Betula pendula |
| CAA06216.1 | AJ004916 | Prunus avium | BAA87922.1 | AB022682 | Psilotum nudum |
| AAB69322.2 | AF012866 | Petroselinum crispum | BAA87336.1 | AB027533 | Ipomoea nil |
| AAB69323.1 | AF012867 | Petroselinum crispum | BAA21787.1 | AB001818 | Ipomoea nil |
| SEQ ID NO. 738 | | | CAA32737.1 | X14597 | Petunia x hybrida |
| AAG16628.1 | AY007545 | Brassica napus | CAA10641.1 | AJ132323 | Casuarina glauca |
| AAF91336.1 | AF249317 | Glycine max | BAA90327.1 | AB037388 | Ipomoea batatas |
| BAA82394.1 | AF000367 | Oryza sativa | AAA33951.1 | L03352 | Glycine max |
| AAC61805.1 | U28007 | Lycopersicon esculentum | BAA90330.1 | AB037391 | Ipomoea batatas |
| AAF91337.1 | AF249318 | Glycine max | BAA75310.1 | AB023791 | Ipomoea batatas |
| BAA94509.1 | AB041503 | Populus nigra | BAA31259.1 | AB015872 | Vitis vinifera |
| BAA94510.1 | AB041504 | Populus nigra | BAA90331.1 | AB037392 | Ipomoea batatas |
| AAK21965.1 | AY028699 | Brassica napus | CAA53583.1 | X75969 | Vitis vinifera |
| BAA78764.1 | AB023482 | Oryza sativa | BAA21789.1 | AB001827 | Ipomoea purpurea |
| AAF91324.1 | AF244890 | Glycine max | BAA21788.1 | AB001819 | Ipomoea nil |
| AAF91323.1 | AF244889 | Glycine max | BAA87338.1 | AB027535 | Ipomoea nil |
| AAG03090.1 | AC073405 | Oryza sativa | BAA87337.1 | AB027534 | Ipomoea purpurea |
| | | | BAA90328.1 | AB037389 | Ipomoea batatas |
| | | | BAA05641.1 | D26594 | Camellia sinensis |

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| AAA87347.1 | M88307 | Brassica juncea | BAA05623.1 | D26574 | Daucus carota |
| AAG27432.1 | AF295637 | Elaeis guineensis | AAD37698.1 | AF145729 | Oryza sativa |
| BAA94697.1 | AB041712 | Chara corallina | BAA93461.1 | AB028073 | Physcomitrella patens |
| BAA94696.1 | AB041711 | Chara corallina | BAA93467.1 | AB028079 | Physcomitrella patens |
| BAA96536.1 | AB044286 | Chara corallina | BAA93468.1 | AB028080 | Physcomitrella patens |
| AAC18355.1 | AF064456 | Oryza sativa subsp. indica | BAA93460.1 | AB028072 | Physcomitrella patens |
| AAA34237.1 | L20691 | Vigna radiata | AAD37699.1 | AF145730 | Oryza sativa |
| CAA52602.1 | X74490 | Zea mays | CAA06717.1 | AJ005820 | Craterostigma plantagineum |
| CAA54583.1 | X77397 | Zea mays | BAA93463.1 | AB028075 | Physcomitrella patens |
| AAC49585.1 | U49103 | Triticum aestivum | CAA65456.2 | X96681 | Oryza sativa |
| AAC49586.1 | U49104 | Triticum aestivum | AAF19980.1 | AF211193 | Oryza sativa |
| AAC49587.1 | U49105 | Triticum aestivum | AAK31270.1 | AC079890 | Oryza sativa |
| AAC49580.1 | U48689 | Triticum aestivum | CAA06728.1 | AJ005833 | Craterostigma plantagineum |
| AAC49584.1 | U48693 | Triticum aestivum | AAD37696.1 | AF145727 | Oryza sativa |
| SEQ ID NO. 760 | | | SEQ ID NO. 765 | | |
| BAA06405.1 | D30744 | Zea mays | BAA92738.1 | AP001389 | Oryza sativa |
| CAC20908.1 | AJ131825 | Scherffelia dubia | CAC27142.1 | AJ132537 | Picea abies |
| SEQ ID NO. 761 | | | BAA23724.1 | AB009086 | Chlamydomonas sp. W80 |
| CAB60277.1 | AJ002586 | Solanum tuberosum | CAA10989.1 | AJ222784 | Hordeum vulgare |
| CAA72107.1 | Y11220 | Solanum tuberosum | SEQ ID NO. 766 | | |
| BAA92172.1 | AB024733 | Symplocarpus renifolius | CAA32185.1 | X14020 | Pisum sativum |
| BAB40658.1 | AB049998 | Oryza sativa | AAA34114.1 | M87839 | Nicotiana tabacum |
| BAA92173.1 | AB024734 | Symplocarpus renifolius | AAA34086.1 | M87838 | Nicotiana tabacum |
| BAB16385.1 | AB042429 | Triticum aestivum | AAA34042.1 | M58522 | Spinacia oleracea |
| BAB16384.1 | AB042428 | Triticum aestivum | SEQ ID NO. 767 | | |
| BAB40657.1 | AB049997 | Oryza sativa | AAA80638.1 | U23784 | Nicotiana glutinosa |
| SEQ ID NO. 762 | | | BAA96368.1 | AB043976 | Panax ginseng |
| AAF01764.2 | AF184277 | Glycine max | AAF42953.1 | AF237624 | Perilla frutescens |
| BAA21017.1 | D26578 | Daucus carota | AAC32133.1 | AF051232 | Picea mariana |
| AAD37697.1 | AF145728 | Oryza sativa | CAA47044.1 | X66413 | Chlamydomonas reinhardtii |
| CAB67118.1 | Y17306 | Lycopersicon esculentum | BAA78583.1 | AU066500 | Chlamydomonas sp. HS-5 |
| AAF01765.1 | AF184278 | Glycine max | SEQ ID NO. 769 | | |
| BAA05624.1 | D26575 | Daucus carota | BAA23815.1 | D67043 | Oryza sativa |
| BAA93466.1 | AB028078 | Physcomitrella patens | CAA45022.1 | X63428 | Panicum miliaceum |
| BAA93465.1 | AB028077 | Physcomitrella patens | BAA04993.1 | D25323 | Panicum miliaceum |
| BAA93464.1 | AB028076 | Physcomitrella patens | AAA98603.1 | L40579 | Glycine max |
| BAA05622.1 | D26573 | Daucus carota | CAA45024.1 | X63430 | Panicum miliaceum |
| BAA05625.1 | D26576 | Daucus carota | | | |

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| BAA84640.1 | AB007911 | Pisum sativum | BAA09645.1 | D63331 | Nicotiana tabacum |
| CAA98178.1 | Z73950 | Lotus japonicus | BAA11770.1 | D83078 | Nicotiana tabacum |
| BAA06702.1 | D31906 | Zea mays | BAA77679.1 | AB027054 | Oryza sativa |
| CAA67153.1 | X98540 | Fagus sylvatica | SEQ ID NO. 778 | | |
| CAA98182.1 | Z73954 | Lotus japonicus | CAA62261.1 | X90727 | Brassica napus |
| AAA34253.1 | L08130 | Volvox carteri | AAF80463.1 | AF162283 | Glycine max |
| AAB28535.1 | S66160 | Oryza sativa | AAB67836.1 | U40666 | Glycine max |
| AAB97115.1 | U58854 | Glycine max | AAG44776.1 | AF271796 | Glycine max |
| AAA61831.1 | L35845 | Oryza sativa | AAG44765.1 | AF271071 | Chloroplast Glycine max |
| SEQ ID NO. 775 | | | CAA62265.1 | X90731 | Brassica napus |
| CAA47962.1 | X67733 | Zea mays | CAA62264.1 | X90730 | Brassica napus |
| AAF34428.1 | AF172282 | Oryza sativa | CAA62266.1 | X90732 | Brassica napus |
| BAA94517.1 | AP001800 | Oryza sativa | CAA62263.1 | X90729 | Brassica napus |
| BAA94516.1 | AP001800 | Oryza sativa | CAA62262.1 | X90728 | Brassica napus |
| AAA33915.1 | L27821 | Oryza sativa | SEQ ID NO. 779 | | |
| BAA94529.2 | AP001800 | Oryza sativa | CAA47056.1 | X66428 | Hordeum vulgare |
| BAA92954.1 | AP001551 | Oryza sativa | AAC26197.1 | AF052429 | Zea mays |
| BAA92953.1 | AP001551 | Oryza sativa | AAK06774.1 | AF323725 | Chlamydomonas reinhardtii |
| AAC27489.1 | AF077130 | Oryza sativa | AAD55563.1 | AF110781 | Volvox carteri f. nagariensis |
| AAC02535.1 | AF044260 | Oryza sativa | SEQ ID NO. 781 | | |
| AAF78021.1 | AF238477 | Oryza sativa | BAA25753.1 | AB012932 | Vigna radiata |
| AAD46916.1 | AF164020 | Oryza sativa | BAA75232.1 | AB018526 | Ipomoea nil |
| AAF68398.1 | AF237568 | Oryza sativa | SEQ ID NO. 783 | | |
| AAD46420.1 | AF100771 | Hordeum vulgare | AAD11482.1 | U51192 | Glycine max |
| AAC49629.1 | U51330 | Triticum aestivum | AAD11481.1 | U51191 | Glycine max |
| AAC01746.1 | AF044489 | Oryza sativa | AAA65636.1 | L13653 | Lycopersicon esculentum |
| BAB39437.1 | AP003338 | Oryza sativa | AAA65637.1 | L13654 | Lycopersicon esculentum |
| AAF78019.1 | AF238475 | Oryza sativa | CAA76374.2 | Y16776 | Spinacia oleracea |
| AAF78044.1 | AF248493 | Oryza sativa | BAA03644.1 | D14997 | Oryza sativa |
| AAF78018.1 | AF238474 | Oryza sativa | CAA80502.1 | Z22920 | Spirodela polyrrhiza |
| AAD46917.1 | AF164021 | Oryza sativa | BAA07664.1 | D42065 | Nicotiana tabacum |
| AAF78016.1 | AF238472 | Oryza sativa | BAA07663.1 | D42064 | Nicotiana tabacum |
| AAD44031.1 | AF085166 | Hordeum vulgare | AAF63024.1 | AF244921 | Spinacia oleracea |
| AAK21965.1 | AY028699 | Brassica napus | BAA77387.1 | AB024437 | Scutellaria baicalensis |
| AAD43962.1 | U78762 | Triticum aestivum | AAA32676.1 | M37637 | Arachis hypogaea |
| SEQ ID NO. 776 | | | CAC21393.1 | AJ401276 | Zea mays |
| AAB95118.1 | U71244 | Brassica rapa | CAA64413.1 | X94943 | Lycopersicon esculentum |
| SEQ ID NO. 777 | | | | | |

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| AAD11483.1 | U51193 | Glycine max | AAB38784.1 | U72154 | Brassica nigra |
| AAD11484.1 | U51194 | Glycine max | AAF03675.1 | AF149311 | Rauvolfia serpentina |
| AAB67737.1 | L77080 | Stylosanthes humilis | BAA11831.1 | D83177 | Costus speciosus |
| CAA62226.1 | X90693 | Medicago sativa | AAF34650.1 | AF221526 | Prunus serotina |
| AAD37429.2 | AF149279 | Phaseolus vulgaris | AAA91166.1 | U39228 | Prunus avium |
| BAA82307.1 | AB027753 | Nicotiana tabacum | CAA64442.1 | X94986 | Manihot esculenta |
| AAD37375.1 | AF145349 | Glycine max | AAB22162.1 | S35175 | Manihot esculenta |
| CAB94692.1 | AJ242742 | Ipomoea batatas | AAF04007.1 | AF163097 | Dalbergia cochinchinensis |
| AAD37427.1 | AF149277 | Phaseolus vulgaris | AAF28800.1 | AF112888 | Catharanthus roseus |
| AAD37430.1 | AF149280 | Phaseolus vulgaris | BAA78708.1 | AB003089 | Polygonum tinctorium |
| BAA92500.1 | AP001383 | Oryza sativa | AAG25897.1 | AF170087 | Cucurbita pepo |
| CAA71492.1 | Y10466 | Spinacia oleracea | AAC69619.1 | AF072736 | Pinus contorta |
| CAB67121.1 | Y19023 | Lycopersicon esculentum | AAB71381.1 | U95298 | Manihot esculenta |
| CAA50597.1 | X71593 | Lycopersicon esculentum | AAD09850.1 | U44087 | Zea mays |
| AAB97734.1 | AF014502 | Glycine max | CRA52293.1 | X74217 | Zea mays |
| CAA71494.1 | Y10468 | Spinacia oleracea | AAD10503.1 | U33816 | Zea mays |
| CAC21391.1 | AJ401274 | Zea mays | AA65946.1 | U25157 | Zea mays |
| NAB41811.1 | L36157 | Medicago sativa | AAB03266.1 | U44773 | Zea mays |
| AAC98519.1 | AF007211 | Glycine max | CAA40057.1 | X56733 | Trifolium repens |
| AAF63027.1 | AF244924 | Spinacia oleracea | AAD02839.1 | AF082991 | Avena sativa |
| CAA62615.1 | X91232 | Mercurialis annua | CAA40058.1 | X56734 | Trifolium repens |
| CAA62227.1 | X90694 | Medicago sativa | AAC49177.1 | U33817 | Sorghum bicolor |
| BAA94962.1 | AB042103 | Asparagus officinalis | CAA55196.1 | X78433 | Avena sativa |
| CAA66037.1 | X97351 | Populus balsamifera subsp. | AAG00614.1 | AF293849 | Secale cereale |
| trichocarpa | | | AAK07429.1 | AF321287 | Musa acuminata |
| BAA01950.1 | D11337 | Vigna angularis | AA887339.1 | L41869 | Hordeum vulgare |
| CAA62597.1 | X91172 | Raphanus sativus | CAA79989.2 | Z21977 | Brassica napus |
| AAC49820.1 | AF014469 | Oryza sativa | CAC08209.1 | AJ005950 | Cicer arietinum |
| BAA90365.1 | AP001081 | Oryza sativa | AAA84906.1 | U28047 | Oryza sativa |
| AAF65464.2 | AF247700 | Oryza sativa | | | |
| BAA89584.1 | AP001073 | Oryza sativa | | | |
| CAA09881.1 | AJ011939 | Trifolium repens | | | |
| SEQ ID NO. 784 | | | SEQ ID NO. 786 | | |
| AAD25300.1 | AF088276 | Lycopersicon esculentum | BAA13232.1 | D87042 | Zea mays |
| CAA63704.1 | X93301 | Oryza sativa | BAA12338.1 | D84408 | Zea mays |
| AAD24966.1 | AF109150 | Lycopersicon esculentum | AAB49984.1 | U90262 | Cucurbita pepo |
| AAD25225.1 | AF088279 | Potamogeton crispus | CAA07481.1 | AJ007366 | Zea mays |
| | | | AAB70706.1 | U82087 | Tortula ruralis |
| | | | AAB80692.1 | U69173 | Glycine max |
| | | | AAC49405.1 | U08140 | Vigna radiata |
| SEQ ID NO. 785 | | | BAA81749.1 | AB017515 | Marchantia polymorpha |
| CAA57913.1 | X82577 | Brassica napus | BAA81751.1 | AB017517 | Marchantia polymorpha |
| | | | BAA81750.1 | AB017516 | Marchantia polymorpha |

| AB017515 | BAA81748.1 | Marchantia polymorpha | AAF33823.1 | AF223351 | Nicotiana tabacum |
|----------|-------------|-------------------------------|----------------|----------|-----------------------------|
| L15390 | AAA33443.1 | Zea mays | CAA75546.1 | Y15253 | Pisum sativum |
| X81393 | CAA57156.1 | Oryza sativa | CAA63893.1 | X94183 | Solanum tuberosum |
| AF000615 | BAA85396.1 | Oryza sativa | AAB03258.1 | U41474 | Glycine max |
| AF048691 | AAC05270.1 | Oryza sativa | AAA74441.1 | U25027 | Glycine max |
| L27484 | AAA61682.1 | Zea mays | CAA65127.1 | X95877 | Nicotiana rustica |
| AF072908 | AAC25423.1 | Nicotiana tabacum | CAA72681.1 | Y11931 | Nicotiana rustica |
| AC073166 | AAAG46110.1 | Oryza sativa | CAA63777.1 | X93564 | Solanum tuberosum |
| D13436 | BAA02698.1 | Oryza sativa | AAD26119.1 | AF108123 | Brassica napus |
| D87707 | BAA13440.1 | Ipomoea batatas | AAB03259.1 | U41475 | Glycine max |
| U69174 | AAB80693.1 | Glycine max | AAB03257.1 | U41473 | Glycine max |
| AF090835 | AAD17800.1 | Mesembryanthemum crystallinum | AAB41107.1 | U85250 | Vigna unguiculata |
| X96723 | CAA65500.1 | Medicago sativa | CAC13988.1 | AJ291467 | Digitaria sanguinalis |
| X81394 | CAA57157.1 | Oryza sativa | AAK01711.1 | AF332874 | Oryza sativa |
| X56599 | CAA39936.1 | Daucus carota | SEQ ID NO. 788 | | |
| D85039 | BAA12715.1 | Zea mays | AAF34428.1 | AF172282 | Oryza sativa |
| U28376 | AAA69507.1 | Zea mays | BAA94516.1 | AP001800 | Oryza sativa |
| AF115406 | AAD28192.2 | Solanum tuberosum | BAA94517.1 | AP001800 | Oryza sativa |
| AY027885 | AAK26164.1 | Cucumis sativus | AAC23542.1 | U20948 | Ipomoea trifida |
| AF216527 | AAF21062.1 | Dunaliella tertiolecta | BAA94529.2 | AP001800 | Oryza sativa |
| AF035944 | AAB88537.1 | Fragaria x ananassa | AAA33915.1 | L27821 | Oryza sativa |
| Z49233 | CAA89202.1 | Chlamydomonas eugametos | CAA73133.1 | Y12530 | Brassica oleracea |
| AF194413 | AAF23900.1 | Oryza sativa | CAA67145.1 | X98520 | Brassica oleracea |
| AF194414 | AAF23901.2 | Oryza sativa | BAA23676.1 | AB000970 | Brassica rapa |
| AF030879 | AAC78558.1 | Solanum tuberosum | AAA33008.1 | M97667 | Brassica napus |
| AF051211 | AAC32116.1 | Picea mariana | CAB89179.1 | AJ245479 | Brassica napus subsp. napus |
| Y18055 | CAB46228.1 | Arachis hypogaea | BAA92836.1 | AB032473 | Brassica oleracea |
| X83869 | CAA58750.1 | Daucus carota | BAA07576.1 | D38563 | Brassica rapa |
| S82324 | AAB47181.1 | Zea mays | BAA92837.1 | AB032474 | Brassica oleracea |
| D84507 | BAA12691.1 | Zea mays | BAA07577.2 | D38564 | Brassica rapa |
| D38452 | BAA22410.1 | Zea mays | AAA33000.1 | M76647 | Brassica oleracea |
| D84508 | BAA12692.1 | Zea mays | BAA92954.1 | AP001551 | Oryza sativa |
| AF289237 | AAG01179.1 | Zea mays | BAA06285.1 | D30049 | Brassica rapa |
| AF009337 | AAC24961.1 | Tradescantia virginiana | BAA21132.1 | D88193 | Brassica rapa |
| AF001168 | BAA90814.1 | Oryza sativa | AAA62232.1 | U00443 | Brassica napus |
| U24188 | AAC49008.1 | Lilium longiflorum | CAA47962.1 | X67733 | Zea mays |
| U38446 | AAF21450.1 | Nicotiana tabacum | CAA79355.1 | Z18921 | Brassica oleracea |
| | | | BAB21001.1 | AB054061 | Brassica rapa |
| | | Solanum tuberosum | CAB41879.1 | Y18260 | Brassica oleracea |
| | | Nicotiana tabacum | AAD46420.1 | AF100771 | Hordeum vulgare |

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|----------------|----------|------------------------------|----------------|----------|----------------------------|
| BAA92953.1 | AP001551 | Oryza sativa | AAC32126.1 | AF051225 | Picea mariana |
| BAB39437.1 | AP003338 | Oryza sativa | CAB46645.1 | AJ243455 | Lycopersicon esculentum |
| AAF78019.1 | AF238475 | Oryza sativa | AAD11475.2 | U52520 | Pisum sativum |
| AAF43400.1 | AF230507 | Oryza sativa subsp. japonica | CAA57555.1 | X82035 | Oryza sativa |
| SEQ ID NO. 789 | | | CAB60839.1 | AJ011108 | Lycopersicon esculentum |
| CAA99990.1 | Z75660 | Sesbania rostrata | CAB46642.1 | AJ243452 | Lycopersicon esculentum |
| CAA44632.1 | X62820 | Glycine max | BAA11560.1 | D82349 | Adiantum capillus-veneris |
| CAA53728.1 | X76122 | Antirrhinum majus | AAA20237.1 | U10077 | Zea mays |
| AAC61889.1 | U24194 | Lupinus luteus | BAA09465.1 | D50869 | Glycine max |
| AAF88072.1 | AF287306 | Cicer arietinum | BAA09466.1 | D50870 | Glycine max |
| AAD31790.1 | AF126107 | Lupinus luteus | SEQ ID NO. 790 | | |
| BAA20411.1 | D86386 | Catharanthus roseus | AAC24504.1 | AF041050 | Populus tremuloides |
| AAC61888.1 | U24193 | Lupinus luteus | CAC36095.1 | X69955 | Glycine max |
| AAD31789.1 | AF126106 | Lupinus luteus | AAF37732.1 | AF052221 | Lolium perenne |
| AAC24245.1 | U44857 | Lupinus luteus | BAA08366.2 | D49367 | Lithospermum erythrorhizon |
| AAD31791.1 | AF126108 | Lupinus luteus | AAG43823.1 | AF212317 | Capsicum annuum |
| BAA20425.1 | D89635 | Nicotiana tabacum | AAF91308.1 | AF239685 | Rubus idaeus |
| CAA71243.1 | Y10161 | Chenopodium rubrum | AAF37733.1 | AF052222 | Lolium perenne |
| CAA53729.1 | X76123 | Antirrhinum majus | CAA31697.1 | X13325 | Petroselinum crispum |
| CAB58998.1 | AJ250315 | Petunia x hybrida | CAA31696.1 | X13324 | Petroselinum crispum |
| AAC41681.1 | L34207 | Petroselinum crispum | AAF37734.1 | AF052223 | Lolium perenne |
| CAB1558.1 | Z37978 | Nicotiana tabacum | AAC24503.1 | AF041049 | Populus tremuloides |
| CAA81232.1 | Z26331 | Glycine max | AAF91309.1 | AF239686 | Rubus idaeus |
| BAA09467.1 | D50871 | Glycine max | AAC39366.1 | AF008184 | Populus x generosa |
| AAC24244.1 | U24192 | Lupinus luteus | AAC39365.1 | AF008183 | Populus x generosa |
| AAD31788.1 | AF126105 | Lupinus luteus | AAB18637.1 | U50845 | Nicotiana tabacum |
| CAB46644.1 | AJ243454 | Lycopersicon esculentum | AAB18638.1 | U50846 | Nicotiana tabacum |
| CAA44188.1 | X62303 | Glycine max | BAA07828.1 | D43773 | Nicotiana tabacum |
| AAA20239.1 | U10079 | Zea mays | AAA33842.1 | M62755 | Solanum tuberosum |
| AAA20238.1 | U10078 | Zea mays | AAF91310.1 | AF239687 | Rubus idaeus |
| BAB00651.1 | AP002804 | Oryza sativa | AAD40664.1 | AF150686 | Solanum tuberosum |
| AAB72021.1 | U66608 | Zea mays | AAB42383.1 | U39405 | Pinus taeda |
| AAB72020.1 | U66607 | Zea mays | AAB42382.1 | U39404 | Pinus taeda |
| BAA33154.1 | AB008189 | Pisum sativum | AAA92669.1 | U12013 | Pinus taeda |
| AAB72019.1 | U66662 | Zea mays | AAA92668.1 | U12012 | Pinus taeda |
| BAA86629.1 | AB024987 | Oryza sativa | BAA08365.1 | D49366 | Lithospermum erythrorhizon |
| CAA57556.1 | X82036 | Oryza sativa | CAA36850.1 | X52623 | Oryza sativa |
| AAA20236.1 | U10076 | Zea mays | AAF73997.2 | AF144504 | Picea smithiana |
| CAA55272.1 | X78504 | Medicago sativa | AAF73995.2 | AF144502 | Pinus armandii |
| CAA48675.1 | X68741 | Medicago sativa | AAF73994.2 | AF144501 | Pinus armandii |

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| AAF73998.2 | AF144505 | Cathaya argyrophylla | CAA09419.1 | AJ010942 | Lycopersicon esculentum |
| AAD40665.1 | AF150687 | Solanum tuberosum | CAB06079.1 | 283829 | Picea abies |
| AAF73996.2 | AF144503 | Pinus armandii | BAB19862.1 | AB052883 | Oryza sativa |
| CAA49575.1 | X69954 | Glycine max | BAA85398.1 | AP000615 | Oryza sativa |
| AAF74004.2 | AF144511 | Pseudotsuga sinensis | AAD55054.1 | AF173655 | Beta vulgaris |
| AAF74016.2 | AF144523 | Nothotsuga longibracteata | CAB52688.1 | AJ132223 | Lycopersicon esculentum |
| AAF74001.2 | AF144508 | Pseudotsuga menziesii | CAB52690.1 | AJ132225 | Lycopersicon esculentum |
| AAF74002.2 | AF144509 | Pseudotsuga sinensis | SEQ ID NO. 796 | | |
| AAF74019.2 | AF144526 | Tsuga canadensis | CAA58994.1 | X84208 | Sinapis alba |
| AAF74018.2 | AF144525 | Tsuga canadensis | CAA76116.1 | Y16190 | Sinapis alba |
| AAF74003.2 | AF144510 | Pseudotsuga sinensis | | | |
| AAF73999.2 | AF144506 | Pseudotsuga menziesii | SEQ ID NO. 799 | | |
| AAF74022.2 | AF144529 | Cedrus atlantica | AAB61708.1 | U93048 | Daucus carota |
| AAF73993.2 | AF144500 | Pinus banksiana | AAG52992.1 | U77888 | Ipomoea nil |
| AAF73992.1 | AF144499 | Pinus banksiana | BAA84787.1 | AP000559 | Oryza sativa |
| AAF74007.2 | AF144514 | Abies firma | CAC20842.1 | AJ250467 | Pinus sylvestris |
| AAA64913.1 | U23787 | Sorghum bicolor | AAB36558.1 | U77888 | Ipomoea nil |
| CAB97359.1 | AJ278455 | Juglans nigra | AAK21965.1 | AY028699 | Brassica napus |
| AAF74000.2 | AF144507 | Pseudotsuga menziesii | CAA61510.1 | X89226 | Oryza sativa |
| SEQ ID NO. 791 | | | AAF59906.1 | AF197947 | Glycine max |
| AAB09756.1 | U31097 | Glycine max | AAF59905.1 | AF197946 | Glycine max |
| | | | AAG03090.1 | AC073405 | Oryza sativa |
| SEQ ID NO. 795 | | | AAC36318.1 | AF053127 | Malus x domestica |
| AAG43998.1 | AF215837 | Apium graveolens var. dulce | AAA33915.1 | L27821 | Oryza sativa |
| CAA47324.1 | X66856 | Nicotiana tabacum | AAG00510.1 | AF285172 | Phaseolus vulgaris |
| AAB06594.1 | U38651 | Medicago truncatula | AAF34426.1 | AF172282 | Oryza sativa |
| BAB19864.1 | AB052885 | Oryza sativa | AAD21872.1 | AF078082 | Phaseolus vulgaris |
| CAA53192.1 | X75440 | Chlorella kessleri | AAG52994.1 | U77888 | Ipomoea nil |
| AAF74565.1 | AF215851 | Spinacia oleracea | BAA92954.1 | AP001551 | Oryza sativa |
| CAA68813.1 | Y07520 | Chlorella kessleri | AAG16628.1 | AY007545 | Brassica napus |
| CAA04511.1 | AJ001061 | Vitis vinifera | BAA94509.1 | AB041503 | Populus nigra |
| CAB07812.1 | Z93775 | Vicia faba | BAA82556.1 | AB030083 | Populus nigra |
| CAA39036.1 | X55349 | Chlorella kessleri | BAA94510.1 | AB041504 | Populus nigra |
| AAF74567.1 | AF215853 | Solanum tuberosum | AAF34428.1 | AF172282 | Oryza sativa |
| AAF74566.1 | AF215852 | Nicotiana tabacum | BAA94529.2 | AP001800 | Oryza sativa |
| AAF74568.1 | AF215854 | Zea mays | AAB82755.1 | U72725 | Oryza longistaminata |
| AAA79761.1 | L08196 | Ricinus communis | AAB93834.1 | U82481 | Zea mays |
| BAB19863.1 | AB052884 | Oryza sativa | SEQ ID NO. 800 | | |
| CAB52689.1 | AJ132224 | Lycopersicon esculentum | CAB38030.1 | AJ010201 | Glycine max |
| CAA70777.1 | Y09590 | Vitis vinifera | | | |

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| AAC19381.1 | AF068844 | Prunus persica | BAA20365.1 | AB004307 | Nicotiana tabacum |
| SEQ ID NO. 801 | | | BAA07479.1 | D38445 | Oryza sativa |
| CAB38030.1 | AJ010201 | Glycine max | BAA02248.1 | D12815 | Oryza sativa |
| AAC19381.1 | AF068844 | Prunus persica | BAA04232.1 | D17410 | Oryza sativa |
| SEQ ID NO. 802 | | | BAA90642.1 | AF001129 | Oryza sativa |
| CAA70968.1 | Y09825 | Solanum tuberosum | BAA85425.1 | AF000616 | Oryza sativa |
| AAD16013.1 | AF080542 | Nepenthes alata | BAA04616.1 | D17790 | Oryza sativa |
| CAA07563.1 | AJ007574 | Ricinus communis | AAB40034.1 | U10418 | Zea mays |
| CAA10608.1 | AJ132228 | Ricinus communis | CAA67796.1 | X99419 | Pisum sativum |
| CAA70778.1 | Y09591 | Vicia faba | AAK09367.1 | AF321525 | Pisum sativum |
| CAA70969.1 | Y09826 | Solanum tuberosum | AAK09370.1 | AF321528 | Pisum sativum |
| AAD16014.1 | AF080543 | Nepenthes alata | AAK09369.1 | AF321527 | Pisum sativum |
| CAA72006.1 | Y11121 | Ricinus communis | AAK09368.1 | AF321526 | Pisum sativum |
| AAD16015.1 | AF080544 | Nepenthes alata | SEQ ID NO. 804 | | |
| AAF15944.1 | AF061434 | Vicia faba | BAA82107.1 | AB022693 | Nicotiana tabacum |
| CRA92992.1 | 268759 | Ricinus communis | AAC31956.1 | AF080595 | Pimpinella brachycarpa |
| AAF15945.1 | AF061435 | Vicia faba | AAC49527.1 | U48831 | Petroselinum crispum |
| AAF15946.1 | AF061436 | Vicia faba | AAD55974.1 | AF121353 | Petroselinum crispum |
| AAB96830.1 | U64823 | Nicotiana sylvestris | BAA77383.1 | AB020590 | Nicotiana tabacum |
| AAB48944.1 | U31932 | Nicotiana sylvestris | CAA88326.1 | Z48429 | Avena fatua |
| BAA93437.1 | AB022783 | Oryza sativa | BAA86031.1 | AB026890 | Nicotiana tabacum |
| CAB42599.1 | AJ238635 | Chlorella protothecoides | AAD16139.1 | AF096299 | Nicotiana tabacum |
| SEQ ID NO. 803 | | | AAC37515.1 | I44134 | Cucumis sativus |
| CRA81210.1 | Z26251 | Helianthus tuberosus | AAE23698.1 | AF193802 | Oryza sativa |
| AAB02721.1 | U58629 | Helianthus tuberosus | AAC49529.1 | U58540 | Petroselinum crispum |
| CAC27143.1 | AJ132538 | Picea abies | AAD16138.1 | AF096298 | Nicotiana tabacum |
| AA79131.1 | U10545 | Chlamydomonas reinhardtii | AAC49528.1 | U56834 | Petroselinum crispum |
| CRA55406.1 | X78851 | Chlamydomonas reinhardtii | BAB16432.1 | AB041520 | Nicotiana tabacum |
| AAB40978.1 | U22328 | Volvox carteri | BAA77358.1 | AB020023 | Nicotiana tabacum |
| AAA33029.1 | M25528 | Mesembryanthemum crystallinum | CAA88331.1 | Z48431 | Avena fatua |
| CAA30978.1 | X12446 | Pisum sativum | AAC35658.1 | AF204925 | Petroselinum crispum |
| BAA13417.1 | D87547 | Oryza sativa | AAD27591.1 | AF121354 | Petroselinum crispum |
| AAA21758.1 | U14956 | Vicia faba | AAC35659.1 | AF204926 | Petroselinum crispum |
| AAA34029.1 | M86349 | Spinacia oleracea | CAB66338.1 | AJ279697 | Betula pendula |
| CAB71293.1 | AJ250378 | Capsicum annuum | AAF61864.1 | AF193771 | Nicotiana tabacum |
| CAA74359.1 | Y14032 | Nicotiana tabacum | AAF61863.1 | AF193770 | Nicotiana tabacum |
| BAA88236.1 | AB035644 | Zea mays | SEQ ID NO. 806 | | |
| BAA88237.1 | AB035645 | Zea mays | CAB52689.1 | AJ132224 | Lycopersicon esculentum |
| | | | CAA09419.1 | AJ010942 | Lycopersicon esculentum |

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|----------------|----------|-------------------------------|----------------|----------|-------------------------------|
| CAB06079.1 | 283829 | Picea abies | AAG02208.1 | AF290201 | Solanum chacoense |
| BAB19864.1 | AB052885 | Oryza sativa | AAA99274.1 | L77969 | Spinacia oleracea |
| CAA47324.1 | X66856 | Nicotiana tabacum | CAB07783.1 | Z93764 | Picea abies |
| AAA79857.1 | L08188 | Ricinus communis | AAA68701.1 | U26538 | Mesembryanthemum crystalli |
| AAA79761.1 | L08196 | Ricinus communis | AGC23179.1 | AF299050 | Brassica oleracea |
| CAA04511.1 | AJ001061 | Vitis vinifera | BAA92258.1 | AB030695 | Raphanus sativus |
| AAB06594.1 | U38651 | Medicago truncatula | AAG23180.1 | AF299051 | Brassica oleracea |
| CAA70777.1 | Y09590 | Vitis vinifera | AAB61378.1 | AF004293 | Brassica rapa |
| BAB19863.1 | AB052884 | Oryza sativa | BAA92259.1 | AB030696 | Raphanus sativus |
| BAA83554.1 | AP000399 | Oryza sativa | CAB93959.1 | AJ289701 | Vicia faba |
| CAA53192.1 | X75440 | Chlorella kessleri | AB09757.1 | U26537 | Mesembryanthemum crystalli |
| CAA68813.1 | Y07520 | Chlorella kessleri | BAA32777.1 | AB012044 | Raphanus sativus |
| CAA39036.1 | X55349 | Chlorella kessleri | SEQ ID NO. 808 | | |
| BAB19862.1 | AB052883 | Oryza sativa | AAK21965.1 | AY028699 | Brassica napus |
| CAB52690.1 | AJ132225 | Lycopersicon esculentum | BAA92836.1 | AB032473 | Brassica oleracea |
| CAB52688.1 | AJ132223 | Lycopersicon esculentum | AAB61708.1 | U93048 | Daucus carota |
| AAD55054.1 | AF173655 | Beta vulgaris | BAA23676.1 | AB000970 | Brassica rapa |
| AAG43998.1 | AF215837 | Apium graveolens var. dulce | AAD21872.1 | AF078082 | Phaseolus vulgaris |
| AAF74565.1 | AF215851 | Spinacia oleracea | CAB41878.1 | Y18259 | Brassica oleracea |
| AAF74568.1 | AF215854 | Zea mays | AAAG2232.1 | U00443 | Brassica napus |
| AAF74567.1 | AF215853 | Solanum tuberosum | AA333000.1 | M76647 | Brassica oleracea |
| AAF74566.1 | AF215852 | Nicotiana tabacum | CAB41879.1 | Y18260 | Brassica oleracea |
| AAD37424.1 | AF149282 | Phaseolus vulgaris | CAA73134.1 | Y12531 | Brassica oleracea |
| AAD45934.1 | AF168773 | Betula pendula | BAA06285.1 | D30049 | Brassica rapa |
| SEQ ID NO. 807 | | | BAA21132.1 | D88193 | Brassica rapa |
| AAC17529.1 | AF067185 | Samanea saman | CAB89179.1 | AJ245479 | Brassica napus subsp. napus |
| AAB18227.1 | U73466 | Mesembryanthemum crystallinum | AA333008.1 | M97667 | Brassica napus |
| BAA92260.1 | AB030697 | Raphanus sativus | CAA67145.1 | X98520 | Brassica oleracea |
| BAA32778.1 | AB012045 | Raphanus sativus | CAA73133.1 | Y12530 | Brassica oleracea |
| BAA92261.1 | AB030698 | Raphanus sativus | AAF66615.1 | AF142596 | Nicotiana tabacum |
| AAD31846.1 | AF133530 | Mesembryanthemum crystallinum | AAF76314.1 | AF220603 | Lycopersicon esculentum |
| AAC16545.1 | AF062393 | Oryza sativa | AAK11568.1 | AF318492 | Lycopersicon hirsutum |
| AAF65845.1 | AF255795 | Allium cepa | CAA74662.1 | Y14286 | Brassica oleracea |
| AAB67868.1 | U60147 | Beta vulgaris | AAB47424.1 | U59317 | Lycopersicon pimpinellifolium |
| CAB46351.1 | Y18312 | Solanum tuberosum | AAB47422.1 | U59318 | Lycopersicon esculentum |
| AAC32107.1 | AF051202 | Picea mariana | AAF76307.1 | AF220602 | Lycopersicon pimpinellifolium |
| AAB67869.1 | U60148 | Beta vulgaris | BAA07576.1 | D38563 | Brassica rapa |
| AA86991.1 | U18403 | Atriplex canescens | AAG16628.1 | AY007545 | Brassica napus |
| AAG30607.1 | AF314656 | Brassica oleracea | CAA97692.1 | Z73295 | Catharanthus roseus |
| AAB18228.1 | U73467 | Mesembryanthemum crystallinum | CAA79355.1 | Z18921 | Brassica oleracea |

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| AAB933834.1 | U82481 | Zea mays | CAA61198.1 | X87946 | Oryza sativa |
| BAA92837.1 | AB032474 | Brassica oleracea | CAA41169.1 | X58180 | Medicago sativa |
| AAA33915.1 | L27821 | Oryza sativa | BAA00887.1 | D10003 | Pisum sativum |
| SEQ ID NO. 809 | | | BAA00886.1 | D10002 | Pisum sativum |
| AAF19196.1 | AF206320 | Musa acuminata | AAA17993.1 | M91192 | Trifolium subterraneum |
| AAF19195.1 | AF206319 | Musa acuminata | AAA33805.1 | L11747 | Populus x generosa |
| AAF63756.1 | AF243475 | Vitis vinifera | AAC78457.1 | AF036948 | Prunus avium |
| CAA70735.1 | Y09541 | Zinnia elegans | BAA23367.1 | D85850 | Daucus carota |
| CAA63496.1 | X92943 | Musa acuminata | CAB42793.1 | AJ238753 | Citrus clementina x Citrus |
| AAB71208.1 | U63550 | Fragaria x ananassa | reticulata | | |
| AAA86241.1 | U41472 | Medicago sativa | AAA99500.1 | L36822 | Stylosanthes humilis |
| CAA43414.1 | X61102 | Nicotiana tabacum | CAA55075.1 | X78269 | Nicotiana tabacum |
| CAA47630.1 | X67158 | Nicotiana tabacum | BAA22963.1 | D17467 | Nicotiana tabacum |
| CAA43413.1 | X61101 | Nicotiana tabacum | BAA22947.1 | AB008199 | Nicotiana tabacum |
| CAA47631.1 | X67159 | Nicotiana tabacum | CAA57057.1 | X81159 | Petroselinum crispum |
| SEQ ID NO. 810 | | | AAG49585.1 | AF325496 | Ipomoea nil |
| AAG49551.1 | AF264022 | Poa secunda | CAA57056.1 | X81158 | Petroselinum crispum |
| CAA44598.1 | X62724 | Hordeum vulgare | CAB42794.1 | AJ238754 | Citrus clementina x Citrus |
| AAB88619.1 | AF034948 | Zea mays | reticulata | | |
| CAA44599.1 | X62725 | Hordeum vulgare | CAA05251.1 | AJ002221 | Digitalis lanata |
| SEQ ID NO. 813 | | | BAA07860.1 | D43802 | Populus kitakamiensis |
| AAA34122.1 | M84466 | Nicotiana tabacum | CAB60719.1 | AJ250836 | Cicer arietinum |
| BAA22948.1 | AB008200 | Nicotiana tabacum | CAA68256.1 | X99997 | Bromheadia finlaysoniana |
| AAA34176.1 | M90692 | Lycopersicon esculentum | AAK15640.1 | AF326116 | Agastache rugosa |
| AAF40224.1 | AF237955 | Rubus idaeus | CAA34226.1 | X16099 | Oryza sativa subsp. japonica |
| CAA37129.1 | X52953 | Glycine max | AAF40223.1 | AF237954 | Rubus idaeus |
| CAA68036.1 | X99705 | Triticum aestivum | BAA11459.1 | D78640 | Ipomoea batatas |
| AAA33389.1 | M29232 | Ipomoea batatas | BAA06337.1 | D30657 | Populus kitakamiensis |
| AAA34179.2 | M83314 | Lycopersicon esculentum | AAD45384.1 | AF165998 | Vigna unguiculata |
| BAA21643.1 | D30656 | Populus kitakamiensis | CAA53733.1 | X76130 | Cucumis melo |
| AAB67733.1 | U43338 | Citrus limon | AAA51873.1 | U16130 | Persea americana |
| BAA95629.1 | AB042520 | Catharanthus roseus | BAB19128.1 | AB041361 | Dianthus caryophyllus |
| BAA05643.1 | D26596 | Camellia sinensis | CAA34715.1 | X16772 | Petroselinum crispum |
| CAA73065.1 | Y12461 | Helianthus annuus | BAA07861.1 | D43803 | Populus kitakamiensis |
| BAA24929.1 | D83076 | Lithospermum erythrorhizon | SEQ ID NO. 814 | | |
| BAA24928.1 | D83075 | Lithospermum erythrorhizon | AAC39318.1 | AF029858 | Sorghum bicolor |
| BAA00885.1 | D10001 | Pisum sativum | AAA19701.1 | L24438 | Thlaspi arvense |
| AAA84889.1 | U39792 | Pinus taeda | BAB40323.1 | AB037244 | Asparagus officinalis |
| | | | AAA32913.1 | M32885 | Persea americana |
| | | | BAB40324.1 | AB037245 | Asparagus officinalis |

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|-------------------------|----------|---------------------------|----------------|----------|-------------------------------|
| AAB94589.1 | AF022460 | Glycine max | AAC49214.1 | U39862 | Oryza longistaminata |
| CAA70575.1 | Y09423 | Nepeta racemosa | AAC49213.1 | U39864 | Oryza eichingeri |
| AAF27282.1 | AF122821 | Capsicum annuum | AAC49220.1 | U39866 | Oryza sativa |
| AAB94584.1 | AF022157 | Glycine max | AAC49218.1 | U39867 | Oryza rufipogon |
| AAB94588.1 | AF022459 | Glycine max | SEQ ID NO. 818 | | |
| AAD47832.1 | AF166332 | Nicotiana tabacum | CAA04644.1 | AJ001270 | Phaseolus vulgaris |
| CAA50312.1 | X70981 | Solanum melongena | AAD20634.1 | AF126255 | Anchusa officinalis |
| BAA03635.1 | D14990 | Solanum melongena | BAA92365.1 | AB039746 | Spirodela punctata |
| CAA50645.1 | X71654 | Solanum melongena | AAF19821.1 | AF200825 | Ipomoea batatas |
| CAA70576.1 | Y09424 | Nepeta racemosa | CAA06921.1 | AJ006224 | Ipomoea batatas |
| BBB40322.1 | AB036772 | Triticum aestivum | AAF19822.1 | AF200826 | Ipomoea batatas |
| CAB56503.1 | AJ238612 | Catharanthus roseus | AAF19820.1 | AF200824 | Glycine max |
| AAD44150.1 | AF124815 | Mentha spicata | CAA07280.1 | AJ006870 | Ipomoea batatas |
| CAA83941.1 | Z33875 | Mentha x piperita | BAA97038.1 | AB029086 | Tagetes patula |
| AAD56282.1 | AF155332 | Petunia x hybrida | BAA97745.1 | AB037887 | Lupinus albus |
| AAD44152.1 | AF124817 | Mentha x piperita | BAA82130.1 | AB023385 | Lupinus albus |
| AAD37433.1 | AF150881 | Lycopersicon esculentum x | BAA82133.1 | AB023388 | Lycopersicon esculentum |
| Lycopersicon peruvianum | | | BAA82131.1 | AB023386 | Glycine max |
| AAD44151.1 | AF124816 | Mentha x piperita | BAA82132.1 | AB023387 | Oryza sativa |
| AAG44132.1 | AF218296 | Pisum sativum | SEQ ID NO. 819 | | |
| AAG14963.1 | AF214009 | Brassica napus | AAF76898.1 | AF274033 | Atriplex hortensis |
| CAA65580.1 | X96784 | Nicotiana tabacum | CAC12822.1 | AJ299252 | Nicotiana tabacum |
| AAG14961.1 | AF214007 | Brassica napus | AAF63205.1 | AF245119 | Mesembryanthemum crystallinum |
| AAG14962.1 | AF214008 | Brassica napus | BAA78738.1 | AB023482 | Oryza sativa |
| CAC27827.1 | AJ295719 | Catharanthus roseus | AAC24587.1 | AF071893 | Prunus armeniaca |
| CAA64635.1 | X95342 | Nicotiana tabacum | CAB96899.1 | AJ251249 | Catharanthus roseus |
| AAB17562.1 | U72654 | Eustoma grandiflorum | CAB96900.1 | AJ251250 | Catharanthus roseus |
| SEQ ID NO. 816 | | | BAB16083.1 | AB036883 | Oryza sativa |
| AAD15818.1 | AF061107 | Zea mays | AAF23899.1 | AF193803 | Oryza sativa |
| AAC28907.1 | U18349 | Phaseolus vulgaris | BAA99376.1 | AF002526 | Oryza sativa |
| AAB00686.1 | U18348 | Phaseolus vulgaris | AAK01089.1 | AF298231 | Hordeum vulgare |
| AAC49219.1 | U39860 | Oryza sativa | SEQ ID NO. 820 | | |
| CAB92300.1 | AJ251719 | Zea mays | AAF03236.1 | AF180143 | Glycine max |
| CAA07615.1 | AJ007709 | Gerbera hybrida | AAA34309.1 | M28059 | Triticum aestivum |
| AAG25928.1 | AF260919 | Petunia x hybrida | AAB88617.1 | AF034946 | Zea mays |
| AAG25927.1 | AF260918 | Petunia x hybrida | AAA34125.1 | I23762 | Lycopersicon esculentum |
| AAC39455.1 | AF020545 | Petunia x hybrida | AAA64427.1 | I29077 | Pisum sativum |
| AAC49217.1 | U39861 | Oryza rufipogon | CAA51821.1 | X73419 | Lycopersicon esculentum |
| AAC49216.1 | U39865 | Oryza officinalis | | | |
| AAC49212.1 | U39863 | Oryza australiensis | | | |

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|----------------|----------|-------------------------------|-------------|----------|-------------------------------|
| AAD511109.1 | AF176040 | Mesembryanthemum crystallinum | CAA04942.1 | AJ001706 | Pinus sylvestris |
| AAF73016.1 | AF262934 | Avicennia marina | CAA06030.1 | AJ003783 | Marsilea quadrifolia |
| AAD42941.1 | AF091621 | Catharanthus roseus | CAA55116.1 | X78307 | Craterostigma plantagineum |
| BAB40310.1 | AB026055 | Nicotiana tabacum | AAA33352.1 | L26924 | Ginkgo biloba |
| AAA34310.1 | M62720 | Triticum aestivum | CAB39974.1 | AJ133422 | Nicotiana tabacum |
| BAB40311.1 | AB026056 | Nicotiana tabacum | CAA42901.1 | X60343 | Hordeum vulgare |
| AAB02168.1 | U15971 | Oryza sativa | AAA87880.1 | U45858 | Zea mays |
| CAA58111.1 | X82938 | Lycopersicon esculentum | AAA87578.1 | U45855 | Zea mays |
| AAA86089.1 | U17250 | Brassica oleracea | CAA51676.1 | X73151 | Zea mays |
| AAG23847.1 | AY004247 | Lycopersicon esculentum | AAA33779.1 | L07501 | Pinus sylvestris |
| BAA90392.1 | AP001081 | Oryza sativa | AAB59010.1 | U96623 | Selaginella lepidophylla |
| AAF22280.1 | AF165420 | Mesembryanthemum crystallinum | CAA42902.1 | X60344 | Petroselinum crispum |
| AAC12662.1 | AF032468 | Zea mays | CAA42905.1 | X60347 | Magnolia liliiflora |
| CAA05772.1 | AJ002959 | Zea mays | CAA51071.1 | X72381 | Physcomitrella patens |
| AAB63513.1 | AF008910 | Prunus armeniaca | AAA82047.1 | U31676 | Oryza sativa |
| BAA21006.1 | D17786 | Oryza sativa | AAA33033.1 | J05223 | Mesembryanthemum crystallinum |
| CAA10494.1 | AJ131733 | Pseudotsuga menziesii | AAA33031.1 | M29956 | Mesembryanthemum crystallinum |
| SEQ ID NO. 821 | | | CAA51675.1 | X73150 | Pisum sativum |
| AAF04624.1 | AF098672 | Brassica oleracea | AAA33667.1 | L07500 | Pisum sativum |
| AAB88615.1 | AF034944 | Zea mays | CAA42903.1 | X60345 | Ranunculus acris |
| AAC67556.1 | AF094774 | Oryza sativa | AAA34077.1 | M14419 | Nicotiana tabacum |
| AAC61599.1 | AF091857 | Pimpinella brachycarpa | AAA03442.1 | U02886 | Atriplex nummularia |
| SEQ ID NO. 822 | | | CAA42904.1 | X60346 | Petunia x hybrida |
| CAB65313.1 | AJ251365 | Nicotiana plumbaginifolia | CAA42103.1 | X59517 | Antirrhinum majus |
| SEQ ID NO. 823 | | | CAA53269.1 | X75597 | Atriplex nummularia |
| CAA07020.1 | AJ006414 | Lycopersicon esculentum | AAA89207.1 | L26922 | Taxus baccata |
| AAD02231.1 | AF043108 | Pisum sativum | AAA87579.1 | U45856 | Zea mays |
| CAB61629.1 | AJ251298 | Oryza sativa | AAA87580.1 | U45857 | Zea mays |
| BAA29033.1 | AB015599 | Coffea arabica | AAB07758.1 | U17005 | Solanum tuberosum |
| BAA24535.1 | AB006692 | Nicotiana sylvestris | AAB54003.1 | U97257 | Lycopersicon esculentum |
| AAD02232.1 | AF043109 | Pisum sativum | AAA32956.1 | M36650 | Hordeum vulgare |
| SEQ ID NO. 826 | | | AAB51592.1 | U93208 | Lycopersicon esculentum |
| AAB57845.1 | U96718 | Selaginella lepidophylla | AAA33466.1 | L13432 | Zea mays |
| SEQ ID NO. 827 | | | AAF64241.1 | AF251217 | Triticum aestivum |
| AAD10215.1 | L32560 | Chloroplast Pinus sylvestris | AAA33465.1 | L13431 | Zea mays |
| AAD10214.1 | L32561 | Chloroplast Pinus sylvestris | AAA34076.1 | M14418 | Nicotiana tabacum |
| | | | AAA84543.1 | M55147 | Chloroplast Pisum sativum |
| | | | BAA85402.1 | AP000615 | Oryza sativa |
| | | | AAA86855.1 | L27668 | Chloroplast Chlamydomonas |
| | | | reinhardtii | | |
| | | | CAA33455.1 | X15408 | Zea mays |

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| SEQ ID NO. | 830 | 831 | 832 | 833 | 834 |
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| CAA62476.1 | X90990 | Solanum tuberosum | Lotus japonicus | BAA76902.1 | AB025968 |
| CAA66616.1 | X97980 | Solanum berthaultii | Cicer arietinum | BAA23533.1 | D89619 |
| AAF66637.1 | AF143505 | Lycopersicon esculentum | Pisum sativum | BAA33460.1 | AB009029 |
| BAA96593.1 | AP002481 | Oryza sativa | Nicotiana glauca | AAG44096.1 | AF216755 |
| CAA82993.1 | Z30332 | Spinacia oleracea | Lycopersicon esculentum | BAA85266.1 | AB033334 |
| CAA82994.1 | Z30333 | Mesembryanthemum crystallinum | Pisum sativum | BAA86931.1 | AB025344 |
| AAA50304.1 | M92989 | Pisum sativum | Glycine max | CAA75588.1 | Y15366 |
| CAA82992.1 | Z30331 | Mesembryanthemum crystallinum | Nicotiana tabacum | SEQ ID NO. | 834 |
| CAA82991.1 | Z30330 | Spinacia oleracea | Capsicum annuum | CAB89179.1 | AJ245479 |
| BAB03409.1 | AP002816 | Oryza sativa | Lycopersicon esculentum | BAA92836.1 | AB032473 |
| CAB82852.1 | Z30329 | Mesembryanthemum crystallinum | Lotus japonicus | BAA92837.1 | AB032474 |
| AAD50584.1 | AF089097 | Salvia columbariae | Pisum sativum | BAB21001.1 | AB054061 |
| AAD50585.1 | AF089099 | Salvia columbariae | Lotus japonicus | | |
| AAD50586.1 | AF089100 | Salvia columbariae | Pisum sativum | | |
| AAB93859.1 | U89678 | Lycopersicon esculentum | Lotus japonicus | | |
| CAA50374.1 | X71057 | Nicotiana tabacum | Glycine max | | |
| AAD50587.1 | AF089101 | Salvia columbariae | | | |
| AAD50588.1 | AF089102 | Salvia columbariae | | | |
| AAB93860.1 | U89679 | Lycopersicon esculentum | | | |
| AAB93861.1 | U89680 | Lycopersicon esculentum | | | |
| AAD50589.1 | AF089103 | Salvia columbariae | | | |
| AAB93862.1 | U89681 | Lycopersicon esculentum | | | |
| CAA46554.1 | X65604 | Hordeum vulgare | | | |
| AAD37166.1 | AF132743 | Oryza sativa | | | |
| SEQ ID NO. | 832 | | | | |
| CAA98160.1 | Z73932 | Lotus japonicus | | | |
| BAA76422.1 | AB024994 | Cicer arietinum | | | |
| BAA02116.1 | D12548 | Pisum sativum | | | |
| CAA69701.1 | Y08425 | Nicotiana glauca | | | |
| CAA80678.1 | U38464 | Lycopersicon esculentum | | | |
| BAA02118.1 | D12550 | Pisum sativum | | | |
| AAB97115.1 | U58854 | Glycine max | | | |
| CAA51011.1 | X72212 | Nicotiana tabacum | | | |
| AAF65510.1 | AF108883 | Capsicum annuum | | | |
| AAA80680.1 | U38466 | Lycopersicon esculentum | | | |
| CAA98161.1 | Z73933 | Lotus japonicus | | | |
| BAA02117.1 | D12549 | Pisum sativum | | | |
| CAA98162.1 | Z73934 | Lotus japonicus | | | |
| AAA50159.1 | I27417 | Glycine max | | | |

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|----------------|----------|-------------------------|----------------|----------------------------|
| AAB37746.1 | U30382 | Cucumis sativus | SEQ ID NO. 846 | Zea mays |
| AAD47901.1 | AF085330 | Pinus taeda | AAD46491.1 | Oryza sativa |
| AAF32409.1 | AF230276 | Triphysaria versicolor | BAA90623.1 | Zea mays |
| AAG13983.1 | AF297522 | Prunus avium | AAA52202.1 | Lithospermum erythrorhizon |
| AAC39512.1 | AF043284 | Gossypium hirsutum | BAA77024.1 | |
| AAB40637.1 | U64893 | Pinus taeda | | |
| AAC96081.1 | AF049354 | Nicotiana tabacum | SEQ ID NO. 848 | |
| AAB40634.1 | U64890 | Pinus taeda | CAC24691.1 | Brassica juncea |
| AAB40635.1 | U64891 | Pinus taeda | AAG17172.1 | Populus tremula x Populus |
| AAB40636.1 | U64892 | Pinus taeda | tremuloides | |
| AAC64201.1 | AF096776 | Lycopersicon esculentum | AAC39514.1 | Oryza sativa |
| CAB43197.1 | AJ239068 | Lycopersicon esculentum | | |
| AAB81662.1 | U85246 | Oryza sativa | SEQ ID NO. 849 | |
| AAD49956.1 | AF167360 | Rumex palustris | AAG22044.1 | Pisum sativum |
| AAC96080.1 | AF049353 | Nicotiana tabacum | AAF00610.1 | Dolichos biflorus |
| AAF17570.1 | AF202119 | Marsilea quadrifolia | AAG32959.1 | Glycine soja |
| AAF35902.1 | AF230333 | Zinnia elegans | AAG32960.1 | Glycine soja |
| AAG32921.1 | AF184233 | Lycopersicon esculentum | AAF00609.1 | Lotus japonicus |
| AAB38074.1 | U30477 | Oryza sativa | AAD31285.1 | Dolichos biflorus |
| AAF32411.1 | AF230278 | Triphysaria versicolor | AAF00611.1 | Medicago sativa |
| AAF17571.1 | AF202120 | Regnellidium diphyllum | BAB18896.1 | Pisum sativum |
| AAF62181.1 | AF247163 | Oryza sativa | BAB18895.1 | Pisum sativum |
| CAC19183.1 | AJ291816 | Cicer arietinum | BAB18894.1 | Pisum sativum |
| AAD13633.1 | AF059489 | Lycopersicon esculentum | BAB18893.1 | Pisum sativum |
| AAF62180.1 | AF247162 | Oryza sativa | BAB18900.1 | Pisum sativum |
| BAB32732.1 | AB049406 | Eustoma grandiflorum | BAB40230.1 | Pisum sativum |
| CAC06433.1 | AJ276007 | Festuca pratensis | BAB18890.1 | Pisum sativum |
| AAG01875.1 | AF291659 | Striga asiatica | BAA75506.1 | Pisum sativum |
| AAC96077.1 | AF049350 | Nicotiana tabacum | BAA9275.1 | Pisum sativum |
| AAC96079.1 | AF049352 | Nicotiana tabacum | BAB40231.1 | Pisum sativum |
| CAB56569.1 | AJ270960 | Lycopersicon esculentum | AAB02720.1 | Solanum tuberosum |
| AAG32920.1 | AF184232 | Lycopersicon esculentum | BAB18891.1 | Pisum sativum |
| AAC96078.1 | AF049351 | Nicotiana tabacum | BAB18892.1 | Pisum sativum |
| AAG01873.1 | AF291657 | Striga asiatica | | |
| SEQ ID NO. 844 | | | SEQ ID NO. 857 | |
| AAD19957.1 | AF109156 | Datisca glomerata | AAG43988.1 | Zea mays |
| | | | BAB19052.1 | Oryza sativa |
| SEQ ID NO. 845 | | | AAF73828.1 | Oryza sativa |
| AAD19957.1 | AF109156 | Datisca glomerata | BAA96793.1 | Oryza sativa |
| | | | BAA96794.1 | Oryza sativa |
| | | | AAA34025.1 | Spinacia oleracea |

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|----------------|----------|----------------------------|----------------|----------|----------------------------|
| AAB41696.1 | U69142 | Spinacia oleracea | CAC21393.1 | AJ401276 | Zea mays |
| BAB18544.1 | AB043540 | Avicennia marina | AAA65636.1 | L13653 | Lycopersicon esculentum |
| CAA71003.1 | Y09876 | Nicotiana tabacum | CAB67121.1 | Y19023 | Lycopersicon esculentum |
| CAA41377.1 | X58463 | Beta vulgaris | CAA62227.1 | X90694 | Medicago sativa |
| CAA49425.1 | X69770 | Atriplex hortensis | CAA50597.1 | X71593 | Lycopersicon esculentum |
| AAB70010.1 | AF017150 | Amaranthus hypochondriacus | AAD37376.1 | AF145350 | Glycine max |
| CAA41376.1 | X58462 | Beta vulgaris | AAB67737.1 | L77080 | Stylosanthes humilis |
| AAB58165.1 | AF000132 | Amaranthus hypochondriacus | CAA71489.1 | Y10463 | Spinacia oleracea |
| BAA21098.1 | AB001348 | Oryza sativa | CAA71496.1 | Y10470 | Spinacia oleracea |
| BAB18543.1 | AB043539 | Avicennia marina | CAA71494.1 | Y10468 | Spinacia oleracea |
| AAC03055.1 | AF045770 | Oryza sativa | BAA06334.1 | D30652 | Populus kitakamiensis |
| CAA53076.1 | X75327 | Pisum sativum | CAA66034.1 | X97348 | Populus balsamifera subsp. |
| BAA05466.1 | D26448 | Hordeum vulgare | trichocarpa | | |
| AAF08296.1 | AF196292 | Apium graveolens | BAA94962.1 | AB042103 | Asparagus officinalis |
| AAB47571.1 | U87848 | Nicotiana plumbaginifolia | CAA80502.1 | Z22920 | Spirodela polyrrhiza |
| AAG43027.1 | AF323586 | Oryza sativa | CAA66035.1 | X97349 | Populus balsamifera subsp. |
| AAB33843.1 | S77096 | Brassica napus | trichocarpa | | |
| CAA53075.1 | X75326 | Zea mays | BAA11852.1 | D83224 | Populus nigra |
| | | | CAA66036.1 | X97350 | Populus balsamifera subsp. |
| | | | trichocarpa | | |
| SEQ ID NO. 858 | | | BAA07241.1 | D38051 | Populus kitakamiensis |
| AAB41812.1 | L36158 | Medicago sativa | AAD11481.1 | U51191 | Glycine max |
| CAA71495.1 | Y10469 | Spinacia oleracea | AAC98519.1 | AF007211 | Glycine max |
| CAA09881.1 | AJ011939 | Trifolium repens | AAA32973.1 | M73234 | Hordeum vulgare |
| CAA62228.1 | X90695 | Medicago sativa | AAB47602.1 | L07554 | Linum usitatissimum |
| AAA98491.1 | L36981 | Petroselinum crispum | AAB41810.1 | L36156 | Medicago sativa |
| AAB02926.1 | U59284 | Linum usitatissimum | AAF63027.1 | AF244924 | Spinacia oleracea |
| BAA77387.1 | AB024437 | Scutellaria baicalensis | AAA34108.1 | J02979 | Nicotiana tabacum |
| CAA66037.1 | X97351 | Populus balsamifera subsp. | AAD43561.1 | AF155124 | Gossypium hirsutum |
| | | | trichocarpa | | |
| CAA71488.1 | Y10462 | Spinacia oleracea | SEQ ID NO. 859 | | |
| BAA01950.1 | D11337 | Vigna angularis | CAA06339.1 | AJ005082 | Cyamopsis tetragonoloba |
| BAA14143.1 | D90115 | Armoracia rusticana | AAA86532.1 | U31544 | Pisum sativum |
| CAA71490.1 | Y10464 | Spinacia oleracea | CAA06338.1 | AJ005081 | Cyamopsis tetragonoloba |
| CAB94692.1 | AJ242742 | Ipomoea batatas | CAC14890.1 | AJ295156 | Phragmites australis |
| BAA92497.1 | AF001383 | Oryza sativa | CAB61752.1 | AJ275318 | Cicer arietinum |
| AAC36707.1 | AF078691 | Manihot esculenta | BAB40967.1 | AB059568 | Pisum sativum |
| BAA92422.1 | AF001366 | Oryza sativa | AAB68605.1 | U82433 | Prunus armeniaca |
| CAA62226.1 | X90693 | Medicago sativa | SEQ ID NO. 860 | | |
| AAF63024.1 | AF244921 | Spinacia oleracea | AAF98390.1 | AF287143 | Brassica napus |
| AAA32676.1 | M37637 | Arachis hypogaea | | | |
| BAA11853.1 | D83225 | Populus nigra | | | |

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|----------------|----------|---------------------------------|----------------|----------|---------------------------|
| BAA93039.1 | AB033758 | Citrus unshiu | CAA30261.1 | X07280 | Nicotiana plumbaginifolia |
| AAF61647.1 | AF190634 | Nicotiana tabacum | AAA51643.1 | M23120 | Nicotiana plumbaginifolia |
| BAA89009.1 | AB027455 | Petunia x hybrida | AAA34078.1 | M63634 | Nicotiana plumbaginifolia |
| AAA59054.1 | L34847 | Zea mays | AAB82772.2 | AF001523 | Musa acuminata |
| BAA36423.1 | AB013598 | Verbena x hybrida | AAF08679.1 | AF004838 | Musa acuminata |
| BAA36421.1 | AB013596 | Perilla frutescens | AAD10383.1 | U72252 | Oryza sativa |
| AAF17077.1 | AF199453 | Sorghum bicolor | AAD28732.1 | AF112965 | Triticum aestivum |
| BAA36422.1 | AB013597 | Perilla frutescens | AAA63539.1 | M60402 | Nicotiana tabacum |
| BAA83484.1 | AB031274 | Scutellaria baicalensis | AAA63541.1 | M59442 | Nicotiana tabacum |
| AAB36652.1 | U32643 | Nicotiana tabacum | AAA63540.1 | M60403 | Nicotiana tabacum |
| AAK28304.1 | AF346432 | Nicotiana tabacum | AAA32939.1 | M62907 | Hordeum vulgare |
| AAB36653.1 | U32644 | Nicotiana tabacum | AAC14399.1 | AF030771 | Hordeum vulgare |
| AAK28303.1 | AF346431 | Nicotiana tabacum | AAA87456.1 | U22147 | Hevea brasiliensis |
| CAA59450.1 | X85138 | Lycopersicon esculentum | BAA77784.1 | AB027429 | Oryza sativa |
| AAD21086.1 | AF127218 | Forsythia x intermedia | BAA77785.1 | AB027430 | Oryza sativa |
| CAB56231.1 | Y18871 | Dorotheanthus bellidiformis | CAB91554.1 | AJ277900 | Vitis vinifera |
| BAA19659.1 | AB002818 | Perilla frutescens | AAD10381.1 | U72250 | Oryza sativa |
| BAB41017.1 | AB047090 | Vitis labrusca x Vitis vinifera | AAA33946.1 | M37753 | Glycine max |
| BAB41023.1 | AB047096 | Vitis vinifera | AAD33881.1 | AF141654 | Nicotiana tabacum |
| BAB41021.1 | AB047094 | Vitis vinifera | AAB86541.1 | AF030166 | Oryza sativa |
| BAB41019.1 | AB047092 | Vitis vinifera | AAD10384.1 | U72253 | Oryza sativa |
| BAB41022.1 | AB047095 | Vitis vinifera | CAB38443.1 | AJ133470 | Hevea brasiliensis |
| BAB41020.1 | AB047093 | Vitis vinifera | AAB03501.1 | U41323 | Glycine max |
| BAB41026.1 | AB047099 | Vitis vinifera | AAA18928.1 | U01901 | Solanum tuberosum |
| BAB41025.1 | AB047098 | Vitis vinifera | AAA88794.1 | U01900 | Solanum tuberosum |
| BAB41024.1 | AB047097 | Vitis vinifera | AAC19114.1 | AF067863 | Solanum tuberosum |
| BAB41018.1 | AB047091 | Vitis labrusca x Vitis vinifera | AAG24921.1 | AF311749 | Hevea brasiliensis |
| AAB81682.1 | AF000371 | Vitis vinifera | CAA03908.1 | AJ000081 | Citrus sinensis |
| AAB81683.1 | AF000372 | Vitis vinifera | CAA37289.1 | X53129 | Phaseolus vulgaris |
| BAA90787.1 | AB038248 | Ipomoea batatas | CAA57255.1 | X81560 | Nicotiana tabacum |
| AAB86473.1 | AF028237 | Ipomoea purpurea | SEQ ID NO. 862 | | |
| BAA12737.1 | D85186 | Gentiana triflora | CAA08798.1 | AJ009720 | Solanum tuberosum |
| BAA89008.1 | AB027454 | Petunia x hybrida | AAK28810.1 | AF310964 | Linum usitatissimum |
| SEQ ID NO. 861 | | | AAA50763.1 | U15605 | Nicotiana glutinosa |
| AAD10386.1 | U72255 | Oryza sativa | AAK28812.1 | AF310968 | Linum usitatissimum |
| BAA89481.1 | AB029462 | Salix gilgiana | AAK28806.1 | AF310960 | Linum usitatissimum |
| CAB85903.1 | AJ251646 | Pisum sativum | AAK28811.1 | AF310966 | Linum usitatissimum |
| CAA49513.1 | X69887 | Brassica napus | AAG09951.1 | AF175388 | Glycine max |
| AAA90953.1 | U30323 | Triticum aestivum | AAK28809.1 | AF310962 | Linum usitatissimum |
| CAA82271.1 | Z28697 | Nicotiana tabacum | AAK28808.1 | AF310961 | Linum usitatissimum |

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| AAK28805.1 | AF310960 | Linum usitatissimum | AAD25300.1 | AF088276 | Lycopersicon esculentum |
| AAK28803.1 | AF310958 | Linum usitatissimum | CAA63704.1 | X93301 | Oryza sativa |
| AAK28804.1 | AF310959 | Linum usitatissimum | AAD24966.1 | AF109150 | Lycopersicon esculentum |
| CAC35321.1 | AJ310150 | Linum usitatissimum | AAD25225.1 | AF088279 | Potamogeton crispus |
| CAC35327.1 | AJ310152 | Linum usitatissimum | SEQ ID NO. 864 | | |
| AAG09953.1 | AF175398 | Glycine max | AAC12662.1 | AF032468 | Zea mays |
| CAC35332.1 | AJ310157 | Linum usitatissimum | CAA05772.1 | AJ002959 | Zea mays |
| AAD25973.1 | AF093646 | Linum usitatissimum | AAA34310.1 | M62720 | Triticum aestivum |
| CAC35337.1 | AJ310162 | Linum usitatissimum | AAF73016.1 | AF262934 | Avicennia marina |
| CAC35325.1 | AJ310150 | Linum usitatissimum | BAB40310.1 | AB026055 | Nicotiana tabacum |
| CAC35336.1 | AJ310161 | Linum usitatissimum | BAB40311.1 | AB026056 | Nicotiana tabacum |
| CAC35328.1 | AJ310153 | Linum usitatissimum | AAA34125.1 | L23762 | Lycopersicon esculentum |
| CAC35330.1 | AJ310155 | Linum usitatissimum | AAB88617.1 | AF034946 | Zea mays |
| CAC35333.1 | AJ310158 | Linum usitatissimum | CAA51821.1 | X73419 | Lycopersicon esculentum |
| CAC35339.1 | AJ310164 | Linum usitatissimum | AAD51109.1 | AF176040 | Mesembryanthemum crystallinum |
| CAC35338.1 | AJ310163 | Linum usitatissimum | AAA64427.1 | L29077 | Pisum sativum |
| CAC35329.1 | AJ310154 | Linum usitatissimum | AAD42941.1 | AF091621 | Catharanthus roseus |
| CAC35331.1 | AJ310156 | Linum usitatissimum | AAB02168.1 | U15971 | Oryza sativa |
| CAC35334.1 | AJ310159 | Linum usitatissimum | BAA90392.1 | AP001081 | Oryza sativa |
| CAC35326.1 | AJ310151 | Linum usitatissimum | AAB63513.1 | AF008910 | Prunus armeniaca |
| CAC35323.1 | AJ310150 | Linum usitatissimum | AAA86089.1 | U17250 | Brassica oleracea |
| AAG09952.1 | AF175389 | Glycine max | CAA10494.1 | AJ131733 | Pseudotsuga menziesii |
| AAG43546.1 | AF211528 | Nicotiana tabacum | CAA58111.1 | X82938 | Lycopersicon esculentum |
| AAD25967.1 | AF093640 | Linum usitatissimum | AAG23847.1 | AY004247 | Lycopersicon esculentum |
| AAD25970.1 | AF093643 | Linum usitatissimum | AAF22280.1 | AF165420 | Mesembryanthemum crystallinum |
| AAD25966.1 | AF093639 | Linum usitatissimum | AAA34309.1 | M28059 | Triticum aestivum |
| AAD25971.1 | AF093644 | Linum usitatissimum | BAA21006.1 | D17786 | Oryza sativa |
| AAD25965.1 | AF093638 | Linum usitatissimum | AAF03236.1 | AF180143 | Glycine max |
| AAB47618.1 | U73916 | Linum usitatissimum | AAC32141.1 | AF051240 | Picea mariana |
| CAA08797.1 | AJ009719 | Solanum tuberosum | SEQ ID NO. 865 | | |
| AAD25968.1 | AF093641 | Linum usitatissimum | CAA65735.1 | X97012 | Solanum tuberosum |
| AAD25974.1 | AF093647 | Linum usitatissimum | SEQ ID NO. 866 | | |
| AAD25975.1 | AF093648 | Linum usitatissimum | CAA63056.1 | X92075 | Solanum tuberosum |
| AAA91022.1 | U27081 | Linum usitatissimum | AAF15291.1 | AF201458 | Medicago sativa |
| AAD25972.1 | AF093645 | Linum usitatissimum | CAA43167.1 | X60755 | Cicer arietinum |
| AAD25969.1 | AF093642 | Linum usitatissimum | SEQ ID NO. 867 | | |
| AAD25976.1 | AF093649 | Linum usitatissimum | AAD02558.1 | AF049933 | Petunia x hybrida |
| AAA91021.1 | U27081 | Linum usitatissimum | | | |
| AAG01052.1 | AF175395 | Glycine max | | | |
| SEQ ID NO. 863 | | | | | |

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| SEQ ID NO. 870 | CAA55047.1 | X78213 | Parthenium argentatum | CAA49463.1 | X69805 | Solanum tuberosum |
| CAA60251.1 | X86553 | | Zea mays | CAA70038.1 | Y08786 | Solanum tuberosum |
| AAD11459.1 | U62748 | | Zea mays | AAB17086.1 | U66376 | Triticum aestivum |
| AAC49360.1 | U29383 | | Zea mays | AAB67316.1 | U65948 | Zea mays |
| AAB71080.1 | U62753 | | Zea mays | BAB40334.1 | AB042937 | Ipomoea batatas |
| AAD11446.1 | U62749 | | Zea mays | BAA01584.1 | D10752 | Oryza sativa |
| AAD11447.1 | U62750 | | Zea mays | AAD28284.1 | AF136268 | Oryza sativa subsp. japoni |
| AAA91168.1 | U40147 | | Zea mays | BAA01616.1 | D10838 | Oryza sativa |
| AAB71079.1 | U62752 | | Zea mays | BAA01855.1 | D11082 | Oryza sativa |
| AAB71078.1 | U62751 | | Zea mays | CAB40981.1 | AJ237897 | Triticum aestivum |
| BAA92988.1 | AF001550 | | Oryza sativa | CAB40979.1 | AJ237897 | Triticum aestivum |
| CAA47042.1 | X66411 | Chlamydomonas reinhardtii | | CAB40980.1 | AJ237897 | Triticum aestivum |
| AAB63814.1 | L46848 | Glycine max | | AAG27622.1 | AF286318 | Triticum aestivum |
| SEQ ID NO. 872 | CAB40743.1 | AJ011885 | Solanum tuberosum | CAA54308.1 | X77012 | Manihot esculenta |
| CAB40746.1 | AJ011888 | | Solanum tuberosum | CAA72987.1 | Y12320 | Triticum aestivum |
| CAB40748.1 | AJ011890 | | Solanum tuberosum | AAG27621.1 | AF286317 | Triticum aestivum |
| AAD30186.1 | AF076679 | | Triticum aestivum | BAA82349.1 | AB029549 | Phaseolus vulgaris |
| AAD30187.1 | AF076680 | | Aegilops tauschii | AAB61925.1 | AF002820 | Triticum aestivum |
| BAA82348.1 | AB029548 | | Phaseolus vulgaris | CAB40749.1 | AJ011891 | Solanum tuberosum |
| CAA56319.1 | X80009 | | Pisum sativum | CAB40745.1 | AJ011887 | Solanum tuberosum |
| CAB40747.1 | AJ011889 | | Solanum tuberosum | CAB40744.1 | AJ011886 | Solanum tuberosum |
| CAA03846.1 | AJ000004 | | Solanum tuberosum | BAA85762.1 | AB028067 | Nicotiana tabacum |
| BAA03738.1 | D16201 | | Oryza sativa | CAA49371.1 | X69713 | Manihot esculenta |
| AAG27623.1 | AF286319 | | Triticum aestivum | BAB40335.1 | AB042940 | Ipomoea batatas |
| CAA72154.1 | Y11282 | | Triticum aestivum | CAA49370.1 | X69712 | Manihot esculenta |
| AAK26821.1 | AF338431 | | Aegilops tauschii | AAC72336.1 | AF064563 | Hordeum vulgare |
| AAK26822.1 | AF338432 | | Triticum aestivum | SEQ ID NO. 873 | | |
| AAC33764.1 | AF072725 | | Zea mays | AAA19571.1 | U10150 | Brassica napus |
| AAA18571.1 | L08065 | | Zea mays | AAD10244.1 | AF030032 | Phaseolus vulgaris |
| BAA82828.1 | AB023498 | | Oryza sativa | AAA85157.1 | U20297 | Solanum tuberosum |
| AAC69753.1 | AF064560 | | Hordeum vulgare | AAA85156.1 | U20296 | Solanum tuberosum |
| CAA56320.1 | X80010 | | Pisum sativum | AAA62351.1 | U20295 | Solanum tuberosum |
| AAC69754.1 | AF064561 | | Hordeum vulgare | AAA85155.1 | U20294 | Solanum tuberosum |
| AAC36471.1 | AF072724 | | Zea mays | AAA92681.1 | U13882 | Pisum sativum |
| AAA82735.1 | U17897 | | Zea mays | CAA78301.1 | Z12839 | Lilium longiflorum |
| AAD50279.2 | AF169833 | Sorghum bicolor | | AAD10246.1 | AF030034 | Phaseolus vulgaris |
| BAA01854.1 | D11081 | Zea mays | | AAC49587.1 | U49105 | Triticum aestivum |
| | | | | AAC49586.1 | U49104 | Triticum aestivum |
| | | | | AAC49585.1 | U49103 | Triticum aestivum |
| | | | | AAC49584.1 | U48693 | Triticum aestivum |

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| AAC49580.1 | U48689 | Triticum aestivum | CAA7554.1 | X99100 | Trifolium repens |
| AAC49579.1 | U48688 | Triticum aestivum | CAA72330.1 | Y11591 | Ricinus communis |
| AAC49578.1 | U48242 | Triticum aestivum | CAA10288.1 | AJ131048 | Cicer arietinum |
| CAA78287.1 | Z12827 | Oryza sativa | CAA72291.1 | Y11527 | Oryza sativa |
| AAA33900.1 | L18914 | Oryza sativa | CAA58760.1 | X83879 | Nicotiana tabacum |
| CAA78288.1 | Z12828 | Oryza sativa | CAB37188.1 | AJ224336 | Medicago sativa |
| AAA16320.1 | L14071 | Bryonia dioica | AAF65766.1 | AF242308 | Euphorbia esula |
| AAC49583.1 | U48692 | Triticum aestivum | CAA47099.1 | X66469 | Medicago sativa |
| SEQ ID NO. 874 | | | AAB41548.1 | L07042 | Medicago sativa |
| AAD13031.1 | AF097938 | Populus tremula x Populus tremuloides | AAD37790.1 | AF149424 | Ipomoea batatas |
| AAK18846.1 | AC082645 | Oryza sativa | AAF23902.1 | AF194415 | Oryza sativa |
| CAB60127.1 | AJ250769 | Pisum sativum | CAA50036.1 | X70703 | Pisum sativum |
| AAC50049.1 | U89342 | Zea mays | CAC13967.1 | AJ250311 | Oryza sativa |
| AAC50048.1 | U89341 | Zea mays | BAA09600.1 | D61377 | Nicotiana tabacum |
| CAB93681.1 | AJ240054 | Solanum tuberosum | AAD52659.1 | AF177392 | Oryza sativa |
| AAB41895.1 | U84888 | Mesembryanthemum crystallinum | AAK01710.1 | AF332873 | Oryza sativa |
| CAB60128.1 | AJ250770 | Pisum sativum | AAG40579.1 | AF216315 | Oryza sativa |
| CAB93680.1 | AJ240053 | Solanum tuberosum | CAA58761.1 | X83880 | Nicotiana tabacum |
| CAB60109.1 | AJ250771 | Brassica napus | CAA56314.1 | X79993 | Avena sativa |
| SEQ ID NO. 875 | | | AAF73236.1 | AF153061 | Pisum sativum |
| CAA73848.1 | Y13437 | Oryza sativa | AAF23903.1 | AF194416 | Oryza sativa |
| BAA92966.1 | AP001551 | Oryza sativa | CAA57721.1 | X82270 | Medicago sativa |
| CAA58594.1 | X83619 | Petunia x hybrida | CAA57719.1 | X82268 | Medicago sativa |
| BAA92214.1 | AP001278 | Oryza sativa | CAC15504.1 | AJ297917 | Lycopersicon esculentum |
| BAB40983.1 | AB059621 | Oryza sativa | CAA49592.1 | X69971 | Nicotiana tabacum |
| CAA54803.1 | X77763 | Nicotiana tabacum | CAA73323.1 | Y12785 | Petroselinum crispum |
| CAA48474.1 | X68411 | Medicago sativa | AAF73257.1 | AF154329 | Pisum sativum |
| CAA48472.1 | X68409 | Medicago sativa | AAG40580.1 | AF216316 | Oryza sativa |
| CAA48473.1 | X68410 | Medicago sativa | AAA33479.1 | M60526 | Zea mays |
| CAA69899.1 | Y08607 | Nicotiana tabacum | SEQ ID NO. 876 | | |
| CAA11860.1 | AJ224163 | Nicotiana tabacum | AAG13131.1 | AF193791 | Fragaria x ananassa |
| CAA73214.1 | Y12674 | Nicotiana tabacum | AAB40530.1 | U38199 | Oryza sativa |
| CAA05329.1 | AJ002315 | Brassica napus | BAB08208.1 | AP002539 | Oryza sativa |
| CAA11862.1 | AJ224165 | Nicotiana tabacum | BAA96769.1 | AP002521 | Oryza sativa |
| CAA58595.1 | X83620 | Petunia x hybrida | AAA90948.1 | U27350 | Oryza sativa |
| CAA11861.1 | AJ224164 | Petunia x hybrida | AAG22488.1 | AF195868 | Vitis vinifera |
| CAA05328.1 | AJ002314 | Nicotiana tabacum | CAA57447.1 | X81854 | Nicotiana tabacum |
| CAC08564.1 | AJ295939 | Medicago sativa | CAA42120.1 | X59546 | Zea mays |
| | | | CAA35589.1 | X17555 | Zea mays |
| | | | CAA91444.1 | Z66543 | Pisum sativum |

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| CAA91445.1 | Z66544 | Pisum sativum | BAA92836.1 | AB032473 | Brassica oleracea |
| AAA68290.1 | U07339 | Oryza sativa | CAB51836.1 | AJ243961 | Oryza sativa |
| AAC49442.1 | U26660 | Oryza sativa | SEQ ID NO. 879 | | |
| CAA57448.1 | X81855 | Nicotiana tabacum | AAC61805.1 | U28007 | Lycopersicon esculentum |
| AAA68289.1 | U07338 | Oryza sativa | AAF91336.1 | AF249317 | Glycine max |
| CAB61763.1 | AJ251246 | Saccharum officinarum | AAF91337.1 | AF249318 | Glycine max |
| CAA79819.1 | Z21722 | Zea mays | AAG16628.1 | AY007545 | Brassica napus |
| BAA03354.1 | D14457 | Zea mays | AAC27894.1 | AF023164 | Zea mays |
| CAA63404.1 | X92743 | Oryza sativa | AAC27895.1 | AF023165 | Zea mays |
| CAA79818.1 | Z21721 | Zea mays | BAA94509.1 | AB041503 | Populus nigra |
| BAA03353.1 | D14456 | Zea mays | BAA94510.1 | AB041504 | Populus nigra |
| SEQ ID NO. 878 | | | AAK21965.1 | AY028699 | Brassica napus |
| AAC61805.1 | U28007 | Lycopersicon esculentum | AAG03090.1 | AC073405 | Oryza sativa |
| AAF91336.1 | AF249317 | Glycine max | AAG25966.1 | AF302082 | Nicotiana tabacum |
| AAF91337.1 | AF249318 | Glycine max | BAA78764.1 | AB023482 | Oryza sativa |
| AAC27894.1 | AF023164 | Zea mays | AAB09771.1 | U67422 | Zea mays |
| AAG16628.1 | AY007545 | Brassica napus | AAF43496.1 | AF131222 | Lophopyrum elongatum |
| AAC27895.1 | AF023165 | Zea mays | AAK11674.1 | AF339747 | Lophopyrum elongatum |
| BAA94509.1 | AB041503 | Populus nigra | AAF66615.1 | AF142596 | Nicotiana tabacum |
| BAA94510.1 | AB041504 | Populus nigra | CAA97692.1 | Z73295 | Catharanthus roseus |
| AAK21965.1 | AY028699 | Brassica napus | CAB51834.1 | 00069 | Oryza sativa |
| AAG03090.1 | AC073405 | Oryza sativa | AAB47421.1 | U59316 | Lycopersicon esculentum |
| AAK11674.1 | AF339747 | Lophopyrum elongatum | AAF76313.1 | AF220603 | Lycopersicon esculentum |
| AAF43496.1 | AF131222 | Lophopyrum elongatum | CAB51836.1 | AJ243961 | Oryza sativa |
| AAG25966.1 | AF302082 | Nicotiana tabacum | AAF76306.1 | AF220602 | Lycopersicon pimpinellifolium |
| BAA78764.1 | AB023482 | Oryza sativa | AAC48914.1 | U02271 | Lycopersicon pimpinellifolium |
| AAB09771.1 | U67422 | Zea mays | AAB47423.1 | U59315 | Lycopersicon pimpinellifolium |
| AAF66615.1 | AF142596 | Nicotiana tabacum | AAK11566.1 | AF318490 | Lycopersicon hirsutum |
| CAB51834.1 | 00069 | Oryza sativa | AAC36318.1 | AF053127 | Malus x domestica |
| CAA97692.1 | Z73295 | Catharanthus roseus | AAF91323.1 | AF244889 | Glycine max |
| AAF76313.1 | AF220603 | Lycopersicon esculentum | AAF91324.1 | AF244890 | Glycine max |
| AAB47421.1 | U59316 | Lycopersicon esculentum | AAK11567.1 | AF318491 | Lycopersicon hirsutum |
| AAF76306.1 | AF220602 | Lycopersicon pimpinellifolium | SEQ ID NO. 880 | | |
| AAC48914.1 | U02271 | Lycopersicon pimpinellifolium | AAA80499.1 | U20594 | Lycopersicon esculentum |
| AAK11566.1 | AF318490 | Lycopersicon pimpinellifolium | CAA54314.1 | X77015 | Solanum tuberosum |
| AAB47423.1 | U59315 | Lycopersicon pimpinellifolium | CAA48038.1 | X67845 | Solanum tuberosum |
| AAK11567.1 | AF318491 | Lycopersicon hirsutum | AAC49457.1 | U50152 | Lycopersicon esculentum |
| CAB89179.1 | AJ245479 | Brassica napus subsp. napus | AAC49456.1 | U50151 | Lycopersicon esculentum |
| AAA33008.1 | M97667 | Brassica napus | AAA80498.1 | U20593 | Lycopersicon esculentum |
| AAC36318.1 | AF053127 | Malus x domestica | | | |

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| CAA68143.1 | X99825 | Petroselinum crispum | BAA06538.1 | D31737 | Nicotiana tabacum |
| BAA90521.1 | AB037678 | Phaseolus vulgaris | AAE68398.1 | AF237568 | Oryza sativa |
| SEQ ID NO. 881 | | | BAA94517.1 | AF001800 | Oryza sativa |
| AAG17470.1 | AF123609 | Triticum aestivum | AAE78044.1 | AF248493 | Oryza sativa |
| AAK31592.1 | AY029178 | Brassica rapa subsp. pekinensis | CAB51834.1 | 00069 | Oryza sativa |
| AAG33645.1 | AF092917 | Vicia sativa | AAE78021.1 | AF238477 | Oryza sativa |
| AAD10204.1 | AF030260 | Vicia sativa | AAD46420.1 | AF100771 | Hordeum vulgare |
| CAB41474.1 | AJ238402 | Catharanthus roseus | AAD46917.1 | AF164021 | Oryza sativa |
| AAB94586.1 | AF022457 | Glycine max | AAE78018.1 | AF238474 | Oryza sativa |
| AAD56282.1 | AF155332 | Petunia x hybrida | AAC01746.1 | AF044489 | Oryza sativa |
| AAA32913.1 | M32885 | Persea americana | BAB39437.1 | AF003338 | Oryza sativa |
| AAA17732.1 | L19074 | Catharanthus roseus | AAE78019.1 | AF238475 | Oryza sativa |
| BAA12159.1 | D83968 | Glycine max | BAA05648.1 | D26601 | Nicotiana tabacum |
| AAC32274.1 | AF081575 | Petunia x hybrida | SEQ ID NO. 883 | | |
| AAG09208.1 | AF175278 | Pisum sativum | BAA83575.1 | AF000399 | Oryza sativa |
| CAA50155.1 | X70824 | Solanum melongena | SEQ ID NO. 884 | | |
| AAC49188.2 | U29333 | Pisum sativum | CAA67575.1 | X99134 | Lycopersicon esculentum |
| AAD37433.1 | AF150881 | Lycopersicon esculentum x | CAA78386.1 | Z13996 | Petunia x hybrida |
| Lycopersicon peruvianum | | | AAB41101.1 | U72762 | Nicotiana tabacum |
| BAA13076.1 | D86351 | Glycine max | BAA88223.1 | AB028651 | Nicotiana tabacum |
| AAD03415.1 | AF069494 | Sinapis alba | BAA88222.1 | AB028650 | Nicotiana tabacum |
| AAG14961.1 | AF214007 | Brassica napus | CAA78387.1 | Z13997 | Petunia x hybrida |
| AAB94590.1 | AF022461 | Glycine max | BAA88224.1 | AB028652 | Nicotiana tabacum |
| AAG14962.1 | AF214008 | Brassica napus | BAA88221.1 | AB028649 | Nicotiana tabacum |
| AAE27282.1 | AF122821 | Capsicum annuum | CAB43399.1 | AJ006292 | Antirrhinum majus |
| AAB94588.1 | AF022459 | Glycine max | CAA66952.1 | X98308 | Lycopersicon esculentum |
| CAA70575.1 | Y09423 | Nepeta racemosa | CAA67600.1 | X99210 | Lycopersicon esculentum |
| BAA22422.1 | AB001379 | Glycyrrhiza echinata | AAA33500.1 | M73028 | Zea mays |
| SEQ ID NO. 882 | | | AAG36774.1 | AF210616 | Zea mays |
| CAC09580.1 | AJ298992 | Fagus sylvatica | CAA64614.1 | X95296 | Lycopersicon esculentum |
| AAA34002.1 | M67449 | Glycine max | AAE22256.1 | AF161711 | Pimpinella brachycarpa |
| AAK11734.1 | AY027437 | Arachis hypogaea | CAA64615.1 | X95297 | Lycopersicon esculentum |
| CAA06334.1 | AJ005077 | Lycopersicon esculentum | CAA75509.1 | Y15219 | Oryza sativa subsp. indica |
| AAG31141.1 | AF305911 | Oryza sativa | SEQ ID NO. 888 | | |
| AAD46406.1 | AF096250 | Lycopersicon esculentum | AAA50763.1 | U15605 | Nicotiana glutinosa |
| AAG31142.1 | AF305912 | Hordeum vulgare | AAG43546.1 | AF211528 | Nicotiana tabacum |
| AAD10056.1 | AF110518 | Lycopersicon esculentum | CAA08798.1 | AJ009720 | Solanum tuberosum |
| AAD10057.1 | AF110519 | Lycopersicon esculentum | CAA08797.1 | AJ009719 | Solanum tuberosum |
| AAK30005.1 | AY029067 | Rosa hybrid cultivar | | | |

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|------------|----------|---------------------|----------------|----------|-------------------------------|
| AAG09954.1 | AF175399 | Glycine max | AAK28805.1 | AF310960 | Linum usitatissimum |
| AAG09951.1 | AF175388 | Glycine max | AAK28808.1 | AF310961 | Linum usitatissimum |
| AAD25965.1 | AF093638 | Linum usitatissimum | SEQ ID NO. 889 | | |
| AAD25968.1 | AF093641 | Linum usitatissimum | AAC18055.1 | AF041848 | Spinacia oleracea |
| AAA91021.1 | U27081 | Linum usitatissimum | AAC26113.1 | AF073830 | Solanum tuberosum |
| AAA91022.1 | U27081 | Linum usitatissimum | AAB64291.1 | AF007582 | Zea mays |
| CAC35330.1 | AJ310155 | Linum usitatissimum | SEQ ID NO. 891 | | |
| AAD25973.1 | AF093646 | Linum usitatissimum | CAB56569.1 | AJ011622 | Antirrhinum majus |
| CAC35339.1 | AJ310164 | Linum usitatissimum | CAB56570.1 | AJ011623 | Antirrhinum majus |
| CAC35326.1 | AJ310151 | Linum usitatissimum | CAB56568.1 | AJ011621 | Antirrhinum majus |
| AAD25974.1 | AF093647 | Linum usitatissimum | AAB51071.1 | U89496 | Zea mays |
| AAD25966.1 | AF093639 | Linum usitatissimum | CAA63113.1 | X92369 | Antirrhinum majus |
| AAD25975.1 | AF093648 | Linum usitatissimum | CAA63061.1 | X92079 | Antirrhinum majus |
| AAD25976.1 | AF093649 | Linum usitatissimum | SEQ ID NO. 892 | | |
| AAD25972.1 | AF093645 | Linum usitatissimum | CAB56570.1 | AJ011623 | Antirrhinum majus |
| AAD25971.1 | AF093644 | Linum usitatissimum | CAB56569.1 | AJ011622 | Antirrhinum majus |
| AAD25970.1 | AF093643 | Linum usitatissimum | CAA63061.1 | X92079 | Antirrhinum majus |
| AAD25967.1 | AF093640 | Linum usitatissimum | CAB56568.1 | AJ011621 | Antirrhinum majus |
| AAD25969.1 | AF093642 | Linum usitatissimum | CAA63113.1 | X92369 | Antirrhinum majus |
| CAC35321.1 | AJ310150 | Linum usitatissimum | AAB51071.1 | U89496 | Zea mays |
| AAG01052.1 | AF175395 | Glycine max | AAB70119.1 | U82230 | Zea mays |
| AAG01051.1 | AF175394 | Glycine max | SEQ ID NO. 893 | | |
| CAC35333.1 | AJ310158 | Linum usitatissimum | CAA71800.1 | Y10847 | Brassica juncea |
| CAC35329.1 | AJ310154 | Linum usitatissimum | CAA71798.1 | Y10845 | Brassica juncea |
| CAC35337.1 | AJ310162 | Linum usitatissimum | AAC25635.1 | AF044172 | Solanum tuberosum |
| CAC35334.1 | AJ310159 | Linum usitatissimum | BAA01279.1 | D10476 | Spinacia oleracea |
| CAC35338.1 | AJ310163 | Linum usitatissimum | BAA02438.1 | D13153 | Triticum aestivum |
| AAB47618.1 | U73916 | Linum usitatissimum | CAA59798.1 | X85803 | Zea mays |
| CAC35331.1 | AJ310156 | Linum usitatissimum | AAD23907.1 | AF073695 | Oryza sativa |
| CAC35323.1 | AJ310150 | Linum usitatissimum | AAD23909.1 | AF073697 | Oryza sativa |
| CAC35328.1 | AJ310153 | Linum usitatissimum | AAC25636.1 | AF044173 | Solanum tuberosum |
| CAC35336.1 | AJ310161 | Linum usitatissimum | CAA06819.1 | AJ006024 | Cicer arietinum |
| CAC35332.1 | AJ310157 | Linum usitatissimum | CAA46086.1 | X64874 | Capsicum annuum |
| CAC35325.1 | AJ310150 | Linum usitatissimum | CAA71799.1 | Y10846 | Brassica juncea |
| CAC35327.1 | AJ310152 | Linum usitatissimum | AAA16973.1 | L05184 | Chloroplast Spinacia oleracea |
| AAF61452.1 | AF139523 | Tagetes erecta | AAD23908.1 | AF073696 | Oryza sativa |
| AAK28801.1 | AF310966 | Linum usitatissimum | AAD23910.1 | AF073698 | Oryza sativa |
| AAK28806.1 | AF310960 | Linum usitatissimum | | | |
| AAK28812.1 | AF310968 | Linum usitatissimum | | | |
| AAK28810.1 | AF310964 | Linum usitatissimum | | | |
| AAK28809.1 | AF310962 | Linum usitatissimum | | | |

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|----------------|------------|----------|-------------------------------|----------------|----------|----------------------------|
| SEQ ID NO. 896 | AAA21758.1 | U14956 | Vicia faba | AAB97736.1 | AF024634 | Petroselinum crispum |
| CAA30978.1 | X12446 | X12446 | Pisum sativum | AAC05022.1 | U67186 | Eschscholzia californica |
| CAB71293.1 | AJ250378 | AJ250378 | Capsicum annuum | CAC27143.1 | AJ132538 | Picea abies |
| AAA33029.1 | M25528 | M25528 | Mesembryanthemum crystallinum | AAC14746.1 | AF057182 | Pisum sativum |
| AAA34029.1 | M86349 | M86349 | Spinacia oleracea | AAK15261.1 | AF302498 | Populus x generosa |
| CAA74359.1 | Y14032 | Y14032 | Nicotiana tabacum | CAA81210.1 | Z26251 | Helianthus tuberosus |
| BAA88237.1 | AB035645 | AB035645 | Zea mays | CAA81211.1 | Z26252 | Vicia sativa |
| BAA04616.1 | D17790 | D17790 | Oryza sativa | AAC14743.1 | AF057179 | Pisum sativum |
| BAA90642.1 | AP001129 | AP001129 | Oryza sativa | AAC14745.1 | AF057181 | Pisum sativum |
| BAA85425.1 | AP000616 | AP000616 | Oryza sativa | SEQ ID NO. 897 | | |
| BAA88236.1 | AB035644 | AB035644 | Zea mays | CAA50520.1 | X71397 | Spinacia oleracea |
| BAA13417.1 | D87547 | D87547 | Oryza sativa | AAD55575.1 | AF110793 | Volvox carteri f. nagarien |
| BAA07479.1 | D38445 | D38445 | Oryza sativa | SEQ ID NO. 898 | | |
| BAA02248.1 | D12815 | D12815 | Oryza sativa | AAD27880.2 | AF139468 | Vigna radiata |
| BAA04232.1 | D17410 | D17410 | Oryza sativa | AAA33344.1 | M83119 | Flaveria trinervia |
| BAA20365.1 | AB004307 | AB004307 | Nicotiana tabacum | AAA68147.1 | U08135 | Hordeum vulgare |
| CAA67796.1 | X99419 | X99419 | Pisum sativum | AAC78106.1 | AF093634 | Oryza sativa |
| AAB40034.1 | U10418 | U10418 | Zea mays | AAF19787.1 | AF162201 | Chloroplast lactuca sativa |
| AAK09367.1 | AF321525 | AF321525 | Pisum sativum | AAD27871.1 | AF135791 | Chlamydomonas reinhardtii |
| AAK09370.1 | AF321528 | AF321528 | Pisum sativum | SEQ ID NO. 899 | | |
| AAA79131.1 | U10545 | U10545 | Chlamydomonas reinhardtii | CAA43841.1 | X61664 | Nicotiana sylvestris |
| AAK09369.1 | AF321527 | AF321527 | Pisum sativum | AAC26196.1 | AF052076 | Zea mays |
| AAK09368.1 | AF321526 | AF321526 | Pisum sativum | AAC78107.1 | AF093635 | Oryza sativa |
| AAB40978.1 | U22328 | U22328 | Volvox carteri | CAA34218.1 | X16092 | Hordeum vulgare |
| CAA55406.1 | X78851 | X78851 | Chlamydomonas reinhardtii | SEQ ID NO. 900 | | |
| AAB59303.1 | L15567 | L15567 | Pisum sativum | BAA25432.1 | AB000706 | Raphanus sativus |
| AAB59333.1 | L15566 | L15566 | Pisum sativum | AAB47752.1 | U77952 | Malus x domestica |
| AAB59349.1 | L15565 | L15565 | Pisum sativum | CAA50259.1 | X70902 | Nicotiana tabacum |
| AAB59304.1 | L15569 | L15569 | Pisum sativum | CAA88361.1 | Z48451 | Capsicum annuum |
| CAA45703.1 | X64351 | X64351 | Spinacia oleracea | CAA09882.1 | AJ011943 | Lycopersicon esculentum |
| CAA49446.1 | X69791 | X69791 | Catharanthus roseus | CAA50260.1 | X70903 | Nicotiana tabacum |
| AAC05021.1 | U67185 | U67185 | Papaver somniferum | CAA62956.1 | X91839 | Fragaria x ananassa |
| CAA81209.1 | Z26250 | Z26250 | Helianthus tuberosus | AAB28589.1 | S66813 | Zea mays |
| AAA34240.1 | L07843 | L07843 | Vigna radiata | AAA33431.1 | L08426 | Zea mays |
| AAK15259.1 | AF302496 | AF302496 | Populus x generosa | AAB25115.1 | S53630 | Zea mays |
| CAA89837.3 | Z49767 | Z49767 | Pseudotsuga menziesii | AAA33430.1 | L08425 | Zea mays |
| AAG17471.1 | AF123610 | AF123610 | Triticum aestivum | CAA40061.1 | X56737 | Zea mays |
| AAK15260.1 | AF302497 | AF302497 | Populus x generosa | | | |
| AAB97737.1 | AF024635 | AF024635 | Petroselinum crispum | | | |

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| CAA34376.1 | X16309 | Zea mays | AA63901.1 | U22432 | Zea mays |
| AAA33436.1 | J04550 | Zea mays | AB97115.1 | U58854 | Glycine max |
| BAA25433.1 | AB000707 | Avena sativa | AB28535.1 | S66160 | Oryza sativa |
| AAF37576.1 | AF232229 | Ceratodon purpureus | | | |
| AAA33432.1 | L08427 | Zea mays | | | |
| | | | SEQ ID NO. | 902 | |
| | | | AA50763.1 | U15605 | Nicotiana glutinosa |
| | | | CA08798.1 | AJ009720 | Solanum tuberosum |
| | | Lotus japonicus | AG09951.1 | AF175388 | Glycine max |
| | | Glycine max | AAK28809.1 | AF310962 | Linum usitatissimum |
| | | Pisum sativum | AAK28810.1 | AF310964 | Linum usitatissimum |
| | | Gossypium hirsutum | AAK28804.1 | AF310959 | Linum usitatissimum |
| | | Lotus japonicus | AAK28812.1 | AF310968 | Linum usitatissimum |
| | | Gossypium hirsutum | AAK28805.1 | AF310960 | Linum usitatissimum |
| | | Mesembryanthemum crystallinum | AAK28803.1 | AF310958 | Linum usitatissimum |
| | | Glycine max | AAK28808.1 | AF310961 | Linum usitatissimum |
| | | Zea mays | AAK28811.1 | AF310966 | Linum usitatissimum |
| | | Oryza sativa | AAK28806.1 | AF310960 | Linum usitatissimum |
| | | Oryza sativa | CAC35328.1 | AJ310153 | Linum usitatissimum |
| | | Beta vulgaris | AA43546.1 | AF211528 | Nicotiana tabacum |
| | | Lotus japonicus | CAC35332.1 | AJ310157 | Linum usitatissimum |
| | | Pisum sativum | CAC35325.1 | AJ310150 | Linum usitatissimum |
| | | Lotus japonicus | CAC35336.1 | AJ310161 | Linum usitatissimum |
| | | Glycine max | CAA08797.1 | AJ009719 | Solanum tuberosum |
| | | Lotus japonicus | CAC35321.1 | AJ310150 | Linum usitatissimum |
| | | Pisum sativum | CAC35329.1 | AJ310154 | Linum usitatissimum |
| | | Oryza sativa | CAC35326.1 | AJ310151 | Linum usitatissimum |
| | | Lotus japonicus | CAC35339.1 | AJ310164 | Linum usitatissimum |
| | | Pisum sativum | CAC35338.1 | AJ310163 | Linum usitatissimum |
| | | Pisum sativum | CAC35330.1 | AJ310155 | Linum usitatissimum |
| | | Lotus japonicus | CAC35334.1 | AJ310159 | Linum usitatissimum |
| | | Pisum sativum | CAC35337.1 | AJ310162 | Linum usitatissimum |
| | | Oryza sativa | CAC35327.1 | AJ310152 | Linum usitatissimum |
| | | Mangifera indica | CAC35323.1 | AJ310150 | Linum usitatissimum |
| | | Zea mays | CAC35331.1 | AJ310156 | Linum usitatissimum |
| | | Lotus japonicus | CAC35333.1 | AJ310158 | Linum usitatissimum |
| | | Pisum sativum | AAD25974.1 | AF093647 | Linum usitatissimum |
| | | Pisum sativum | AAD25976.1 | AF093649 | Linum usitatissimum |
| | | Fagus sylvatica | AG09953.1 | AF175398 | Glycine max |
| | | Medicago sativa | AAD25966.1 | AF093639 | Linum usitatissimum |
| | | Lotus japonicus | AAD25965.1 | AF093638 | Linum usitatissimum |
| | | Volvox carteri | AAD25967.1 | AF093640 | Linum usitatissimum |
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| | | | SEQ ID NO. | 901 | |
| | | | CA98183.1 | Z73955 | |
| | | | CA54506.1 | X77301 | |
| | | | BAA02108.1 | D12540 | |
| | | | AAD48018.1 | AF165095 | |
| | | | CA98186.1 | Z73958 | |
| | | | AAD48019.1 | AF165096 | |
| | | | AB47558.1 | U87143 | |
| | | | CA54507.1 | X77302 | |
| | | | BAA06701.1 | D31905 | |
| | | | BAA02904.1 | D13758 | |
| | | | AAK15703.1 | AF327517 | |
| | | | CA89049.1 | Z49190 | |
| | | | CA98181.1 | Z73953 | |
| | | | BAA02114.1 | D12546 | |
| | | | CA98180.1 | Z73952 | |
| | | | AB97114.1 | U58853 | |
| | | | CA98179.1 | Z73951 | |
| | | | BAA02113.1 | D12545 | |
| | | | BAA02437.1 | D13152 | |
| | | | CA98177.1 | Z73949 | |
| | | | BAA02112.1 | D12544 | |
| | | | BAA02111.1 | D12543 | |
| | | | CA98184.1 | Z73956 | |
| | | | BAA02110.1 | D12542 | |
| | | | CAA41966.1 | X59276 | |
| | | | CA95859.1 | Z71276 | |
| | | | BAA06702.1 | D31906 | |
| | | | CA98178.1 | Z73950 | |
| | | | BAA02109.1 | D12541 | |
| | | | BAA84640.1 | AB007911 | |
| | | | CAA67153.1 | X98540 | |
| | | | CA55865.1 | X79278 | |
| | | | CA98182.1 | Z73954 | |
| | | | AAA34253.1 | L08130 | |

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| AAD25970.1 | AF093643 | Linum usitatissimum | BAA92836.1 | AB032473 | Brassica oleracea |
| AAD25975.1 | AF093648 | Linum usitatissimum | AAA33915.1 | L27821 | Oryza sativa |
| AAD25971.1 | AF093644 | Linum usitatissimum | BAA92837.1 | AB032474 | Brassica oleracea |
| AAB47618.1 | U73916 | Linum usitatissimum | SEQ ID NO. 904 | | |
| AAD25969.1 | AF093642 | Linum usitatissimum | AAF17077.1 | AF199453 | Sorghum bicolor |
| AAG09952.1 | AF175389 | Glycine max | AAF61647.1 | AF190634 | Nicotiana tabacum |
| AAD25972.1 | AF093645 | Linum usitatissimum | BAA89009.1 | AB027455 | Petunia x hybrida |
| AAD25968.1 | AF093641 | Linum usitatissimum | AAF98390.1 | AF287143 | Brassica napus |
| AAA91022.1 | U27081 | Linum usitatissimum | AAD21086.1 | AF127218 | Forsythia x intermedia |
| AAD25973.1 | AF093646 | Linum usitatissimum | BAA93039.1 | AB033758 | Citrus unshiu |
| AAA91021.1 | U27081 | Linum usitatissimum | BAA83484.1 | AB031274 | Scutellaria baicalensis |
| AAG09954.1 | AF175399 | Glycine max | BAA12737.1 | D85186 | Gentiana triflora |
| SEQ ID NO. 903 | | | CAA54612.1 | X77462 | Manihot esculenta |
| AAA34002.1 | M67449 | Glycine max | BAA19155.1 | AB000623 | Nicotiana tabacum |
| CAC09580.1 | AJ298992 | Fagus sylvatica | BAA89008.1 | AB027454 | Petunia x hybrida |
| AAK11734.1 | AY027437 | Arachis hypogaea | BAA90787.1 | AB038248 | Ipomoea batatas |
| CAA06334.1 | AJ005077 | Lycopersicon esculentum | AAB36653.1 | U32644 | Nicotiana tabacum |
| AAD10057.1 | AF110519 | Lycopersicon esculentum | AAB36652.1 | U32643 | Nicotiana tabacum |
| AAD10056.1 | AF110518 | Lycopersicon esculentum | AAK28303.1 | AF346431 | Nicotiana tabacum |
| AAD46406.1 | AF096250 | Lycopersicon esculentum | AAK28304.1 | AF346432 | Nicotiana tabacum |
| AAG31141.1 | AF305911 | Oryza sativa | CAA30761.1 | X07940 | Zea mays |
| AAG31142.1 | AF305912 | Hordeum vulgare | AAK16410.1 | AF320086 | Zea mays |
| AAK30005.1 | AY029067 | Rosa hybrid cultivar | CAA31855.1 | X13500 | Zea mays |
| AAK21965.1 | AY028699 | Brassica napus | BAA36421.1 | AB013596 | Perilla frutescens |
| AAF91323.1 | AF244889 | Glycine max | AAB86473.1 | AF028237 | Ipomoea purpurea |
| AAF91324.1 | AF244890 | Glycine max | CAA30760.1 | X07937 | Zea mays |
| AAF91322.1 | AF244888 | Glycine max | BAB41021.1 | AB047094 | Vitis vinifera |
| AAK16409.1 | AF320086 | Zea mays | BAB41019.1 | AB047092 | Vitis vinifera |
| BAA06538.1 | D31737 | Nicotiana tabacum | BAB41025.1 | AB047098 | Vitis vinifera |
| BAA21132.1 | D88193 | Brassica rapa | AAD55985.1 | AF165148 | Petunia x hybrida |
| BAA06285.1 | D30049 | Brassica rapa | BAB41018.1 | AB047091 | Vitis labrusca x Vitis vinifera |
| CAA97692.1 | Z73295 | Catharanthus roseus | BAB41017.1 | AB047090 | Vitis labrusca x Vitis vinifera |
| CAA08995.1 | AJ010091 | Brassica napus | BAB41023.1 | AB047096 | Vitis vinifera |
| CAB51834.1 | 00069 | Oryza sativa | CAA59450.1 | X85138 | Lycopersicon esculentum |
| AAF43496.1 | AF131222 | Lophopyrum elongatum | CAA54614.1 | X77464 | Manihot esculenta |
| AAK11674.1 | AF339747 | Lophopyrum elongatum | AAB81682.1 | AF000371 | Vitis vinifera |
| AAA62232.1 | U00443 | Brassica napus | AAB81683.1 | AF000372 | Vitis vinifera |
| AAC36318.1 | AF053127 | Malus x domestica | BAB41024.1 | AB047097 | Vitis vinifera |
| AAC23542.1 | U20948 | Ipomoea trifida | CAA54558.1 | X77369 | Solanum melongena |
| BAA23676.1 | AB000970 | Brassica rapa | BAB41026.1 | AB047099 | Vitis vinifera |

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| BAB41020.1 | AB047093 | Vitis vinifera | AAD26204.1 | AF117268 | Malus x domestica |
| BAB41022.1 | AB047095 | Vitis vinifera | AAB20555.1 | S69616 | Hordeum vulgare |
| BAA19659.1 | AB002818 | Perilla frutescens | CAA78930.1 | Z17221 | Gerbera hybrida |
| | | | BAB40789.1 | AB058641 | Lilium hybrid division I |
| SEQ ID NO. 905 | | | AAD49343.1 | AF169801 | Lilium hybrid cv. 'Acapulc |
| AAF43095.1 | AF053769 | Malus x domestica | CAA75997.1 | Y16041 | Zea mays |
| AAD00252.1 | U76408 | Lycopersicon esculentum | BAA36182.1 | AB003495 | Oryza sativa |
| CAB88029.1 | AJ276389 | Dendrobium grex Madame Thong-In | BAA36183.1 | AB003496 | Oryza sativa |
| BAA31699.1 | AB016000 | Ipomoea nil | CAA91924.1 | Z67983 | Dianthus caryophyllus |
| BAA31700.1 | AB016001 | Ipomoea nil | CAA69253.1 | Y07956 | Oryza sativa |
| BAB18584.1 | AB043956 | Ceratopteris richardii | AAF60298.1 | AF233639 | Petunia x hybrida |
| AAB41849.1 | U65648 | Solanum tuberosum | CAA33544.1 | X15537 | Petunia x hybrida |
| BAB18582.1 | AB043954 | Ceratopteris richardii | AAG01030.1 | AF291097 | Dianthus gratianopolitanus |
| BAB18583.1 | AB043955 | Ceratopteris richardii | BAA19658.1 | AB002817 | Perilla frutescens |
| AAD09582.1 | U76409 | Lycopersicon esculentum | AAB94014.1 | AF010283 | Sorghum bicolor |
| AAC33008.1 | AF080104 | Pisum sativum | BAA12736.1 | D85185 | Gentiana triflora |
| AAG27464.1 | AF308454 | Medicago truncatula | CAA75998.1 | Y16042 | Zea mays |
| BAA31698.1 | AB015999 | Ipomoea nil | CAA75996.1 | Y16040 | Zea mays |
| AAF23753.2 | AF193813 | Brassica oleracea | CAA70345.1 | Y09127 | Forsythia x intermedia |
| AAD00251.1 | U76407 | Lycopersicon esculentum | AAB94015.1 | AF010283 | Sorghum bicolor |
| AAC49917.1 | AF000141 | Lycopersicon esculentum | CAA79154.1 | Z18277 | Lycopersicon esculentum |
| AAC32817.1 | AF050180 | Oryza sativa | CAA33543.1 | X15536 | Antirrhinum majus |
| AAB81079.1 | AF022390 | Hordeum vulgare | BAA74700.1 | AB018438 | Ipomoea purpurea |
| AAD00692.1 | U90099 | Picea mariana | BAA34637.1 | AB019243 | Ipomoea batatas |
| AAC49918.1 | AF000142 | Lycopersicon esculentum | AAB84048.1 | AF028601 | Ipomoea purpurea |
| AAD13611.1 | AF100455 | Zea mays | BAA74699.1 | AB018437 | Ipomoea purpurea |
| AAC32818.1 | AF050181 | Oryza sativa | BAA36406.1 | AB011667 | Ipomoea purpurea |
| | | | BAA59333.1 | AB006793 | Ipomoea nil |
| SEQ ID NO. 906 | | | BAA22072.1 | AB006792 | Ipomoea nil |
| AAF17576.1 | AF202182 | Glycine max | BAB20075.1 | AB012924 | Torenia hybrida |
| AAB41550.1 | U28213 | Medicago sativa subsp. sativa | AAB62873.1 | AF007096 | Bromheadia finlaysoniana |
| AAD17997.1 | AF107404 | Pisum sativum | BAA36405.1 | AB011667 | Ipomoea purpurea |
| CAA72420.1 | Y11749 | Vitis vinifera | | | |
| CAA91922.1 | Z67981 | Callistephus chinensis | SEQ ID NO. 910 | | |
| AAD54273.1 | AF167556 | Glycine max | CAC00658.1 | AJ292745 | Petroselinum crispum |
| CAA53578.1 | X75964 | Vitis vinifera | CAC00657.1 | AJ292744 | Petroselinum crispum |
| AAD56578.1 | AF184271 | Daucus carota | CAA74023.1 | Y13676 | Antirrhinum majus |
| BAA12723.1 | D85102 | Rosa hybrid cultivar | CAA74022.1 | Y13675 | Antirrhinum majus |
| AAC25960.1 | AF029685 | Fragaria x ananassa | AAD55394.1 | AF176641 | Lycopersicon esculentum |
| BAA84940.1 | AB018686 | Camellia sinensis | BAA22204.1 | D63951 | Nicotiana tabacum |
| BAA84939.1 | AB018685 | Camellia sinensis | CAA71687.1 | Y10685 | Glycine max |

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|----------------|----------|------------------------------|----------------|----------|-----------------------------|
| AAK25822.1 | AF350505 | Phaseolus vulgaris | BAA4939.1 | AB018685 | Camellia sinensis |
| CAA41453.1 | X58577 | Petroselinum crispum | BAA74700.1 | AB018438 | Ipomoea purpurea |
| BAA11431.1 | D78609 | Oryza sativa | AAB84048.1 | AF028601 | Ipomoea purpurea |
| BAA36492.1 | AB021736 | Oryza sativa | BAA84940.1 | AB018686 | Camellia sinensis |
| AAK01953.1 | AY026054 | Phaseolus acutifolius | CAA53578.1 | X75964 | Vitis vinifera |
| AAC37418.1 | L34551 | Oryza sativa | BAA34637.1 | AB019243 | Ipomoea batatas |
| CAA70216.1 | Y09013 | Triticum aestivum | AAF17576.1 | AF202182 | Glycine max |
| CAA71795.1 | Y10834 | Hordeum vulgare | AAD54273.1 | AF167556 | Glycine max |
| AAB36514.1 | U57389 | Phaseolus vulgaris | BAA36407.1 | AB011667 | Ipomoea purpurea |
| CAA71768.1 | Y10809 | Petroselinum crispum | AAD56578.1 | AF184271 | Daucus carota |
| AAK14790.1 | AY027510 | Catharanthus roseus | AAC25960.1 | AF029685 | Fragaria x ananassa |
| CAC00656.1 | AJ292743 | Petroselinum crispum | CAA75997.1 | Y16041 | Zea mays |
| CAAL1499.1 | AJ223624 | Spinacia oleracea | AAB94014.1 | AF010283 | Sorghum bicolor |
| CAA66477.1 | X97903 | Vicia faba | CAA75998.1 | Y16042 | Zea mays |
| | | | CAA75996.1 | Y16040 | Zea mays |
| SEQ ID NO. 912 | | | SEQ ID NO. 914 | | |
| AAG09817.1 | AF278698 | Lolium perenne | CAA57551.1 | X82030 | Phaseolus vulgaris |
| CAA13176.1 | AJ231134 | Saccharum officinarum | CAC66479.1 | X97905 | Vicia faba |
| CAA66707.1 | X98083 | Zea mays | CAC01237.1 | AJ292767 | Nicotiana plumbaginifolia |
| CAA74071.1 | Y13734 | Zea mays | AAF66823.1 | AF190655 | Nicotiana tabacum |
| CAC07424.1 | AJ295838 | Populus balsamifera subsp. | AAK30205.1 | AF349964 | Daucus carota |
| trichocarpa | | | AAB38974.1 | U81318 | Triticum aestivum |
| CAA12276.1 | AJ224986 | Populus balsamifera subsp. | CAA81127.1 | Z26042 | Anemia phyllitidis |
| trichocarpa | | | AAA79045.1 | U34742 | Spinacia oleracea |
| AAF43141.1 | AF217958 | Populus tremuloides | AAC39368.1 | AF043297 | Chlamydomonas reinhardtii |
| CAA56103.1 | X79566 | Eucalyptus gunnii | AAF63202.1 | AF240679 | Cucumis sativus |
| CAA66063.1 | X97433 | Eucalyptus gunnii | CAA11894.1 | AJ224325 | Hordeum vulgare |
| AAG16242.1 | AF297877 | Eucalyptus saligna | AAF66825.1 | AF190657 | Nicotiana tabacum |
| CAA75352.1 | Y15069 | Zea mays | CAA06469.1 | AJ005286 | Hordeum vulgare |
| AAD53957.1 | AF033851 | Vigna radiata | SEQ ID NO. 915 | | Oryza sativa |
| AAD49343.1 | AF169801 | Lilium hybrid cv. 'Acapulco' | CAC37011.1 | AJ238318 | |
| CAA78930.1 | Z17221 | Gerbera hybrida | SEQ ID NO. 918 | | Pisum sativum |
| CAA72420.1 | Y11749 | Vitis vinifera | CAA77595.1 | Z11510 | |
| CAA91922.1 | Z67981 | Callistephus chinensis | SEQ ID NO. 920 | | Nicotiana tabacum |
| AAD56579.1 | AF184272 | Daucus carota | BAA33755.2 | AB017480 | Capsicum annuum |
| BAB40789.1 | AB058641 | Lilium hybrid division I | CAA62084.1 | X90472 | Chloroplast Medicago sativa |
| BAA22072.1 | AB006792 | Ipomoea nil | AAK15322.1 | AF332134 | |
| AAD26204.1 | AF117268 | Malus x domestica | | | |
| BAA59333.1 | AB006793 | Ipomoea nil | | | |
| BAA74699.1 | AB018437 | Ipomoea purpurea | | | |
| BAA36406.1 | AB011667 | Ipomoea purpurea | | | |

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|----------------|----------|-----------------------------|----------------|----------|-------------------------------|
| AA17230.1 | AF117339 | Nicotiana tabacum | AAK11568.1 | AF318492 | Lycopersicon hirsutum |
| CAA0935.1 | AJ012165 | Capsicum annuum | AAF91336.1 | AF249317 | Glycine max |
| BAB17624.1 | AB033535 | Oryza sativa | SEQ ID NO. 927 | | |
| BAA13021.1 | D86121 | Spinacia oleracea | CAB51545.1 | AJ243876 | Lycopersicon esculentum |
| AAF27916.1 | AF220199 | Pinus taeda | SEQ ID NO. 928 | | |
| BAB19880.1 | AB052887 | Oryza sativa | AAF80450.1 | AF161719 | Triticum aestivum |
| BAB17626.1 | AB033537 | Oryza sativa | AA72110.1 | U79958 | Pisum sativum |
| BAB17625.1 | AB033536 | Oryza sativa | AAF22842.1 | AF209910 | Prunus dulcis |
| CAB55389.1 | AL117264 | Oryza sativa | AAK31596.1 | AY029172 | Helianthus annuus |
| AA67835.1 | U43398 | Solanum tuberosum | AA72113.1 | U79961 | Zea mays |
| AAF12877.1 | AF205377 | Chlamydomonas reinhardtii | BAA92985.1 | AP001550 | Oryza sativa |
| AAF37267.1 | AF220406 | Vitis riparia | | | |
| CAA06853.1 | AJ006095 | Cicer arietinum | | | |
| SEQ ID NO. 926 | | | SEQ ID NO. 929 | | |
| AAK21965.1 | AY028699 | Brassica napus | AAK09431.1 | AF324244 | Phaseolus vulgaris |
| AG03090.1 | AC073405 | Oryza sativa | AAA18546.1 | M94204 | Nicotiana tabacum |
| AG16628.1 | AY007545 | Brassica napus | AAF15312.1 | AF145053 | Oryza sativa |
| AB61708.1 | U93048 | Daucus carota | AAG32661.1 | AF264877 | Zea mays |
| AAF43496.1 | AF131222 | Lophopyrum elongatum | AAK08141.1 | AF234537 | Pelargonium graveolens |
| AAK11674.1 | AF339747 | Lophopyrum elongatum | AAD54821.1 | AF137379 | Chloroplast Nephrolepis |
| BAA78764.1 | AB023482 | Oryza sativa | olivacea | | |
| AAA33915.1 | L27821 | Oryza sativa | CAA74893.1 | Y14561 | Pisum sativum |
| BAA94509.1 | AB041503 | Populus nigra | AAF43860.1 | AF166114 | Chloroplast Mesostigma viride |
| CAA73134.1 | Y12531 | Brassica oleracea | CAA75382.1 | Y15108 | Glycine max |
| BAA94510.1 | AB041504 | Populus nigra | SEQ ID NO. 936 | | |
| CAB51834.1 | 00069 | Oryza sativa | AA38796.1 | U73203 | Nicotiana glutinosa |
| AAC61805.1 | U28007 | Lycopersicon esculentum | AA69757.1 | U75644 | Lycopersicon esculentum |
| AAC23542.1 | U20948 | Ipomoea trifida | AAC49666.1 | U83708 | Lycopersicon esculentum |
| BAA92954.1 | AP001551 | Oryza sativa | SEQ ID NO. 937 | | |
| CAA97692.1 | Z73295 | Catharanthus roseus | AAC24195.1 | AF020425 | Nicotiana tabacum |
| AAF66615.1 | AF142596 | Nicotiana tabacum | AAK18620.1 | AF352732 | Nicotiana tabacum |
| AA93834.1 | U82481 | Zea mays | AA40608.1 | U54774 | Nicotiana tabacum |
| AAF76313.1 | AF220603 | Lycopersicon esculentum | AAA33710.1 | L16977 | Petunia x hybrida |
| AA47421.1 | U59316 | Lycopersicon esculentum | AA33709.1 | L16797 | Petunia x hybrida |
| CAB89179.1 | AJ245479 | Brassica napus subsp. napus | AAC39483.1 | AF020424 | Nicotiana tabacum |
| AAA33008.1 | M97667 | Brassica napus | BAB32870.1 | AB056062 | Oryza sativa |
| AAF91337.1 | AF249318 | Glycine max | BAB32868.1 | AB056060 | Oryza sativa |
| AAF91324.1 | AF244890 | Glycine max | BAB32871.1 | AB056063 | Oryza sativa |
| AAF91323.1 | AF244889 | Glycine max | | | |
| BAA23676.1 | AB000970 | Brassica rapa | | | |

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|----------------|----------|---------------------------------|----------------|----------|-------------------------|
| BAB32869.1 | AB056061 | Oryza sativa | AAC36318.1 | AF053127 | Malus x domestica |
| CAA50719.1 | X71900 | Lycopersicon esculentum | AAB61708.1 | U93048 | Daucus carota |
| | | | AAF91323.1 | AF244889 | Glycine max |
| SEQ ID NO. 938 | | | AAG52992.1 | U77888 | Ipomoea nil |
| AAF61647.1 | AF190634 | Nicotiana tabacum | AAF91324.1 | AF244890 | Glycine max |
| AA59054.1 | I34847 | Zea mays | AAF91322.1 | AF244888 | Glycine max |
| BAA89009.1 | AB027455 | Petunia x hybrida | AAB36558.1 | U77888 | Ipomoea nil |
| BAA36423.1 | AB013598 | Verbena x hybrida | AAF59906.1 | AF197947 | Glycine max |
| AAF98390.1 | AF287143 | Brassica napus | AAK21965.1 | AY028699 | Glycine max |
| BAA36421.1 | AB013596 | Perilla frutescens | AAG03090.1 | AC073405 | Brassica napus |
| BAA93039.1 | AB033758 | Citrus unshiu | CAC20842.1 | AJ250467 | Oryza sativa |
| BAA36422.1 | AB013597 | Perilla frutescens | AAD27675.1 | AF119222 | Pinus sylvestris |
| BAA83484.1 | AB031274 | Scutellaria baicalensis | AAG52994.1 | U77888 | Oryza sativa |
| CAB56231.1 | Y18871 | Dorotheanthus bellidiformis | AAF91337.1 | AF249318 | Ipomoea nil |
| AAB36653.1 | U32644 | Nicotiana tabacum | AAF91336.1 | AF249317 | Glycine max |
| AAB36652.1 | U32643 | Nicotiana tabacum | AAA33915.1 | L27821 | Glycine max |
| AAK28303.1 | AF346431 | Nicotiana tabacum | AAC61805.1 | U28007 | Oryza sativa |
| AAK28304.1 | AF346432 | Nicotiana tabacum | AAG25966.1 | AF302082 | Lycopersicon esculentum |
| CAA59450.1 | X85138 | Nicotiana tabacum | BAA84787.1 | AP000559 | Nicotiana tabacum |
| BAA89008.1 | AB027454 | Lycopersicon esculentum | AAF59905.1 | AF197946 | Oryza sativa |
| AAF17077.1 | AF199453 | Petunia x hybrida | BAA83373.1 | AP000391 | Glycine max |
| AAB81683.1 | AF000372 | Sorghum bicolor | | | Oryza sativa |
| BAB41017.1 | AB047090 | Vitis vinifera | SEQ ID NO. 940 | | |
| BAB41022.1 | AB047095 | Vitis labrusca x Vitis vinifera | CAA06339.1 | AJ005082 | Cyamopsis tetragonoloba |
| BAB41020.1 | AB047093 | Vitis vinifera | AAA86532.1 | U31544 | Pisum sativum |
| BAA12737.1 | D85186 | Vitis vinifera | CAA06338.1 | AJ005081 | Cyamopsis tetragonoloba |
| BAB41018.1 | AB047091 | Gentiana triflora | BAB40967.1 | AB059568 | Pisum sativum |
| AAD21086.1 | AF127218 | Vitis labrusca x Vitis vinifera | | | |
| AAB81682.1 | AF000371 | Forsythia x intermedia | SEQ ID NO. 941 | | |
| BAA19659.1 | AB002818 | Vitis vinifera | AAB27811.1 | S64617 | Brassica napus |
| AAD04166.1 | AF101972 | Perilla frutescens | AAC34126.1 | AF085197 | Nicotiana tabacum |
| BAA90787.1 | AB038248 | Phaseolus lunatus | AAC27992.1 | AF038875 | Nicotiana tabacum |
| AAB86473.1 | AF028237 | Ipomoea batatas | BAA76349.1 | AB025029 | Nicotiana tabacum |
| CAA54614.1 | X77464 | Ipomoea purpurea | AAG24908.1 | AF305075 | Nicotiana benthamiana |
| | | Manihot esculenta | CAA10108.1 | AJ012662 | Nicotiana tabacum |
| SEQ ID NO. 939 | | | AAD19905.1 | AF104412 | Nicotiana tabacum |
| AAK28345.1 | AF243040 | Lycopersicon esculentum | CAA76392.1 | Y16796 | Pisum sativum |
| AAK28346.1 | AF243041 | Zea mays | CAA77062.1 | Y18135 | Nicotiana tabacum |
| AAC12254.1 | U58474 | Lycopersicon esculentum | BAA33151.1 | AB008186 | Pisum sativum |
| AAC12253.1 | U58473 | Lycopersicon esculentum | CAA37979.1 | X54046 | Oryza sativa |
| AAA33715.1 | L27341 | Petunia integrifolia | BAA94512.1 | AB041506 | Populus nigra |

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| CAA38893.1 | X55052 | Catharanthus roseus | AAA63543.1 | M55019 | Lycopersicon esculentum |
| CAA55669.1 | X79065 | Zea mays | CAA76054.1 | Y16088 | Lupinus luteus |
| AAD10528.1 | U87949 | Zea mays | AAF00471.1 | AF178458 | Lupinus luteus |
| CAB56779.1 | X62976 | Daucus carota | AAD22975.1 | AF126551 | Solanum tuberosum subsp. |
| CAA39239.1 | X55706 | Glycine max | tuberosum | | |
| AAB81177.2 | AF012212 | Tetraselmis chui | AAA63403.1 | M55021 | Zea mays |
| AAB87568.1 | AF034201 | Dunaliella tertiolecta | CAA48638.1 | X68678 | Zea mays |
| BAA01412.1 | D10555 | Daucus carota | AAF65770.1 | AF242312 | Euphorbia esula |
| BAA20971.1 | D10556 | Daucus carota | AAAS7045.1 | L29469 | Oryza sativa |
| AAA33913.1 | J04538 | Oryza sativa | AAB51386.1 | U92087 | Solanum commersonii |
| | | | AAA57046.1 | L29470 | Oryza sativa |
| | | | AAA62706.1 | M55018 | Brassica napus |
| SEQ ID NO. 942 | | | AAC05639.1 | AF052206 | Chlamydomonas reinhardtii |
| AAC12662.1 | AF032468 | Zea mays | AAA57044.1 | L29471 | Oryza sativa |
| CAA05772.1 | AJ002959 | Zea mays | AAG01536.1 | AF291180 | Capsicum annuum |
| AAA34310.1 | M62720 | Triticum aestivum | AAA64430.1 | L32095 | Vicia faba |
| AAF73016.1 | AF262934 | Avicennia marina | CAA10766.1 | AJ132763 | Pseudotsuga menziesii |
| BAB40310.1 | AB026055 | Nicotiana tabacum | CAA65889.1 | X97255 | Digitalis lanata |
| BAB40311.1 | AB026056 | Nicotiana tabacum | CAA78459.1 | Z14081 | Nicotiana tabacum |
| AAB88617.1 | AF034946 | Zea mays | | | |
| AAA64427.1 | L29077 | Pisum sativum | SEQ ID NO. 944 | | |
| CAA51821.1 | X73419 | Lycopersicon esculentum | BAB21558.1 | AB037156 | Coix lacryma-jobi |
| AAD51109.1 | AF176040 | Mesembryanthemum crystallinum | BAA01472.1 | D10622 | Zea mays |
| AAA34125.1 | L23762 | Lycopersicon esculentum | BAA07327.1 | D38130 | Zea mays |
| AAD42941.1 | AF091621 | Catharanthus roseus | AAD13812.1 | AF117334 | Ipomoea batatas |
| BAA90392.1 | AP001081 | Oryza sativa | CAA11899.1 | AJ224331 | Castanea sativa |
| AAB02168.1 | U15971 | Oryza sativa | BAB18768.1 | AB038394 | Triticum aestivum |
| AAB63513.1 | AF008910 | Prunus armeniaca | BAB18766.1 | AB038392 | Triticum aestivum |
| AAA86089.1 | U17250 | Brassica oleracea | BAA19608.1 | D31700 | Glycine max |
| CAA58111.1 | X82938 | Lycopersicon esculentum | BAA95416.1 | AB039673 | Helianthus annuus |
| CAA10494.1 | AJ131733 | Pseudotsuga menziesii | BAA19610.1 | D64115 | Glycine max |
| AAG23847.1 | AY004247 | Lycopersicon esculentum | CAA50437.1 | X71124 | Carica papaya |
| AAF22280.1 | AF165420 | Mesembryanthemum crystallinum | AAF23127.1 | AF198389 | Lycopersicon esculentum |
| AAA34309.1 | M28059 | Triticum aestivum | AAF23126.1 | AF198388 | Lycopersicon esculentum |
| AAC32141.1 | AF051240 | Picea mariana | AAB24010.1 | S49967 | Oryza |
| BAA21006.1 | D17786 | Oryza sativa | AAA33903.1 | J03469 | Oryza sativa |
| AAF03236.1 | AF180143 | Glycine max | AAB66355.1 | U54702 | Oryza sativa |
| | | | AAK15090.1 | AF240007 | Sesamum indicum |
| SEQ ID NO. 943 | | | AAK33911.1 | J05595 | Oryza sativa |
| CAA52414.1 | X74403 | Phaseolus vulgaris | AAA32672.1 | L16624 | Ambrosia artemisiifolia |
| CAA59468.1 | X85185 | Catharanthus roseus | CAA40860.1 | X57658 | Oryza sativa |
| CAA69598.1 | Y08273 | Digitalis lanata | | | |

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| BAA13547.1 | D88156 | Hyoscyamus niger | AAC35951.1 | AF079355 | Mesembryanthemum crystalli |
| BAA85844.1 | AB026544 | Hyoscyamus niger | CAC09576.1 | AJ298988 | Fagus sylvatica |
| CAB52307.1 | AJ245634 | Solanum tuberosum | CAA72341.1 | Y11607 | Medicago sativa |
| CAC19810.1 | AJ292343 | Solanum tuberosum | AAD17804.1 | AF092431 | Lotus japonicus |
| AAA33282.1 | I20474 | Datura stramonium | AAD17805.1 | AF092432 | Lotus japonicus |
| AAB09776.1 | I20485 | Hyoscyamus niger | CAC10358.1 | AJ277086 | Nicotiana tabacum |
| BAA85845.1 | AB026545 | Hyoscyamus niger | CAC10359.1 | AJ277087 | Nicotiana tabacum |
| CAA45866.1 | X64566 | Cuphea lanceolata | AAC36697.1 | AF075579 | Mesembryanthemum crystalli |
| CAA45793.1 | X64463 | Brassica napus | AAG43835.1 | AF213455 | Zea mays |
| AAB20114.2 | S60064 | Brassica napus | AAC36698.1 | AF075580 | Mesembryanthemum crystalli |
| CAA74176.1 | Y13861 | Nicotiana tabacum | CAB90633.1 | AJ277743 | Fagus sylvatica |
| CAA05816.1 | AJ003025 | Oryza sativa | AAC36700.1 | AF075582 | Mesembryanthemum crystalli |
| CAA74177.1 | Y13862 | Nicotiana tabacum | CAC09575.1 | AJ298987 | Fagus sylvatica |
| CAA05879.1 | AJ003124 | Petunia x hybrida | AAC26828.1 | AF075603 | Oryza sativa |
| AAC78100.1 | AF093628 | Oryza sativa | AAC36699.1 | AF075581 | Mesembryanthemum crystallinum |
| CAA64729.1 | X95462 | Brassica napus | AAB93832.1 | U81960 | Zea mays |
| AAB05206.1 | I22766 | Medicago truncatula | SEQ ID NO. 959 | | |
| AAB05205.1 | I22765 | Medicago truncatula | CAA06756.1 | AJ005899 | Nicotiana tabacum |
| SEQ ID NO. 949 | | | CAA06757.1 | AJ005900 | Nicotiana tabacum |
| AAF61374.1 | AF133267 | Thlaspi caerulescens | AAD56039.1 | AF184068 | Citrus limon |
| AAD30548.1 | AF136579 | Lycopersicon esculentum | SEQ ID NO. 964 | | |
| AAF97509.1 | AF246266 | Lycopersicon esculentum | CAA71238.1 | Y10156 | Brassica napus |
| AAC17441.1 | AF065444 | Pisum sativum | CAB62165.1 | AJ223307 | Brassica napus |
| AAF97510.1 | AF246266 | Lycopersicon esculentum | CAA71237.1 | Y10155 | Brassica napus |
| AAD30549.1 | AF136580 | Lycopersicon esculentum | AAC49181.1 | U39289 | Brassica napus |
| AAG09635.1 | AY007281 | Medicago truncatula | AAC49182.1 | U39319 | Brassica napus |
| SEQ ID NO. 953 | | | SEQ ID NO. 970 | | |
| AAC18941.1 | AF058757 | Zea mays | AAF21982.1 | AF115543 | Populus tremula x Populus |
| SEQ ID NO. 954 | | | tremuloides | | |
| AAG43550.1 | AF211532 | Nicotiana tabacum | CAB55535.1 | AJ011794 | Zea mays |
| BAA96875.1 | AB045121 | Oryza sativa | SEQ ID NO. 972 | | |
| BAA78746.1 | AB023482 | Oryza sativa | CAA06216.1 | AJ004916 | Prunus avium |
| BAA85438.1 | AF000616 | Oryza sativa | AAB69323.1 | AF012867 | Petroselinum crispum |
| BAA77204.1 | AB026262 | Cicer arletinum | AAB69322.2 | AF012866 | Petroselinum crispum |
| SEQ ID NO. 958 | | | SEQ ID NO. 973 | | |
| AAD11430.1 | AF097667 | Mesembryanthemum crystallinum | AAG13424.1 | AC051634 | Oryza sativa |
| CAB90634.1 | AJ277744 | Fagus sylvatica | | | |

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|----------------|----------|---------------------------|----------------|----------|-------------------------------------|
| SEQ ID NO. 974 | AF024512 | Oryza sativa | SEQ ID NO. 978 | M68929 | Mitochondrion Marchantia polymorpha |
| SEQ ID NO. 976 | | | SEQ ID NO. 981 | AF040700 | Oryza sativa |
| BAA32557.1 | AB017159 | Daucus carota | | | |
| AAA82743.1 | U19481 | Citrus maxima | | | |
| CAA59008.1 | X84226 | Nicotiana tabacum | | | |
| CAA52976.1 | X75082 | Solanum tuberosum | | | |
| BAA82390.1 | AP000367 | Oryza sativa | SEQ ID NO. 983 | | Spinacia oleracea |
| CAA59010.1 | X84228 | Beta vulgaris | AAA74715.1 | M64682 | Spinacia oleracea |
| CAA59009.1 | X84227 | Populus x generosa | AAA34041.1 | M57413 | Spinacia oleracea |
| BAA07328.1 | D38132 | Cucurbita sp. | CAA40019.1 | X56691 | Plastid Marchantia polymorpha |
| | | | CAA28130.1 | X04465 | |
| SEQ ID NO. 977 | | | SEQ ID NO. 984 | | |
| AAG49341.1 | AF319457 | Petroselinum crispum | BAA88222.1 | AB028650 | Nicotiana tabacum |
| AAB71526.1 | U94781 | Helianthus annuus | CAA78386.1 | Z13996 | Petunia x hybrida |
| AAK21311.1 | AF338254 | Petroselinum crispum | CAA78387.1 | Z13997 | Petunia x hybrida |
| AAK31926.1 | AF147738 | Zea mays | CAA64615.1 | X95297 | Lycopersicon esculentum |
| AAB93521.1 | U94783 | Helianthus annuus | CAB43399.1 | AJ006292 | Antirrhinum majus |
| AAF43440.1 | AF233886 | Vallisneria spiralis | AAK19616.1 | AF336283 | Gossypium hirsutum |
| AAK17931.2 | AF104924 | Zea mays | AAK19611.1 | AF336278 | Gossypium hirsutum |
| AAB71529.1 | U94785 | Helianthus annuus | CAA64614.1 | X95296 | Lycopersicon esculentum |
| BAA87057.1 | AB034154 | Chara corallina | CAA72218.1 | Y11415 | Oryza sativa |
| BAB03273.1 | AB007459 | Chara corallina | CAA67575.1 | X99134 | Lycopersicon esculentum |
| AAB71527.1 | U94782 | Helianthus annuus | CAA72217.1 | Y11414 | Oryza sativa |
| AAB71528.1 | U94784 | Helianthus annuus | CAA66952.1 | X98308 | Lycopersicon esculentum |
| AAC27525.1 | AF077352 | Chlamydomonas reinhardtii | BAA88224.1 | AB028652 | Nicotiana tabacum |
| AAB53062.1 | U94398 | Acetabularia cliftonii | BAA88221.1 | AB028649 | Nicotiana tabacum |
| AAD34597.1 | AF147739 | Zea mays | CAA72187.1 | Y11352 | Oryza sativa |
| AAB53061.1 | U94397 | Acetabularia cliftonii | BAA23337.1 | D88617 | Oryza sativa |
| AAF43441.1 | AF233887 | Vallisneria spiralis | BAA81733.2 | AB029162 | Glycine max |
| CAA47477.1 | X67103 | Anemia phyllitidis | BAA81732.1 | AB029161 | Glycine max |
| CAA47476.1 | X67102 | Anemia phyllitidis | BAA81731.1 | AB029160 | Glycine max |
| AAK92114.1 | U48788 | Gossypium hirsutum | BAA81730.1 | AB029159 | Glycine max |
| AAK92121.1 | U48786 | Vigna mungo | BAA81736.1 | AB029165 | Glycine max |
| AAK92117.1 | U48787 | Triticum aestivum | CAA72185.1 | Y11350 | Oryza sativa |
| AAK92111.1 | U48789 | Azolla rubra | AAK13574.1 | AC037425 | Oryza sativa |
| AAK92120.1 | U48785 | Vigna mungo | AAK41101.1 | U72762 | Nicotiana tabacum |
| AAK92119.1 | U48782 | Trifolium subterraneum | BAA88223.1 | AB028651 | Nicotiana tabacum |
| AAK92115.1 | U48790 | Nitella cristata | CAA50221.1 | X70876 | Hordeum vulgare |

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| AAK19619.1 | AF3336286 | Gossypium hirsutum | AA55577.1 | AF184270 | Daucus carota |
| BAA23338.1 | D88618 | Oryza sativa | CAA51192.1 | X72594 | Matthiola incana |
| AAG36774.1 | AF210616 | Zea mays | CAA55628.1 | X78994 | Medicago sativa |
| CAA50224.1 | X70879 | Hordeum vulgare | AAC49929.1 | AF022142 | Petunia x hybrida |
| CAA50222.1 | X70877 | Hordeum vulgare | CAA43027.1 | X60512 | Petunia x hybrida |
| AAA33500.1 | M73028 | Zea mays | CAA51191.1 | X72593 | Callistephus chinensis |
| CAA65525.1 | X96749 | Oryza sativa | CAA53580.1 | X75966 | Vitis vinifera |
| CAA67600.1 | X99210 | Lycopersicon esculentum | CAA41146.1 | X58138 | Hordeum vulgare |
| SEQ ID NO. 985 | | | AAD56580.1 | AF184273 | Daucus carota |
| CAA69598.1 | X08273 | Digitalis lanata | BAR20143.1 | AB003779 | Perilla frutescens |
| CAA59468.1 | X85185 | Catharanthus roseus | AAD56581.1 | AF184274 | Daucus carota |
| AAA57045.1 | L29469 | Oryza sativa | BAA21897.1 | D83041 | Ipomoea nil |
| AA05639.1 | AF052206 | Chlamydomonas reinhardtii | SEQ ID NO. 988 | | |
| AAA57046.1 | L29470 | Oryza sativa | AAB63030.1 | U83921 | Daucus carota |
| CAA48638.1 | X68678 | Zea mays | AAF37386.1 | AF134835 | Medicago truncatula |
| AAD22975.1 | AF126551 | Solanum tuberosum subsp. tuberosum | BAA76896.1 | AB022687 | Lycopersicon esculentum |
| AAAG3403.1 | M55021 | Zea mays | BAA76895.1 | AB022686 | Lycopersicon esculentum |
| CAA52414.1 | X74403 | Phaseolus vulgaris | AAC18914.1 | U94748 | Petunia x hybrida |
| AAAG3543.1 | M55019 | Lycopersicon esculentum | AAB70241.1 | AF016845 | Lycopersicon esculentum |
| AAA57044.1 | L29471 | Oryza sativa | AAF27919.1 | AF220203 | Malus x domestica |
| AAF00471.1 | AF178458 | Lupinus luteus | SEQ ID NO. 989 | | |
| CAA76054.1 | Y16088 | Lupinus luteus | CAA70815.1 | Y09602 | Hordeum vulgare |
| AAF65770.1 | AF242312 | Euphorbia esula | CAB59202.1 | X78878 | Hordeum vulgare |
| AAB51386.1 | U92087 | Solanum commersonii | BAB08188.1 | AP002539 | Oryza sativa |
| AAA62706.1 | M55018 | Brassica napus | CAA55478.1 | X78877 | Hordeum vulgare |
| AAA64430.1 | L32095 | Vicia faba | AAD22150.1 | AF061282 | Sorghum bicolor |
| CAA10766.1 | AJ132763 | Pseudotsuga menziesii | AAF44708.1 | AF242849 | Lycopersicon esculentum |
| AAG01536.1 | AF291180 | Capsicum annuum | CAA70816.1 | Y09603 | Hordeum vulgare |
| CAA65889.1 | X97255 | Digitalis lanata | AAD22151.1 | AF061282 | Sorghum bicolor |
| CAA78459.1 | Z14081 | Nicotiana tabacum | CAB58992.1 | X78876 | Hordeum vulgare |
| SEQ ID NO. 987 | | | AAD01265.1 | AF006080 | Solanum berthaultii |
| CAC14568.1 | AJ237848 | Brassica napus | AAD01263.1 | AF006078 | Solanum berthaultii |
| BAA81862.1 | AB026295 | Oryza sativa | AAF64227.1 | AF248647 | Lycopersicon pennellii |
| CAA49353.1 | X69664 | Malus sp. | AAD01264.1 | AF006079 | Solanum berthaultii |
| CAA61486.1 | X89199 | Bromheadia finlaysoniana | AAD22164.1 | AF061282 | Sorghum bicolor |
| AAB39995.1 | U82432 | Dianthus caryophyllus | AAD42963.2 | AF141384 | Matricaria chamomilla |
| CAA49839.1 | X70378 | Dianthus caryophyllus | AAA32940.1 | J03897 | Hordeum vulgare |
| CAA51190.1 | X72592 | Dianthus caryophyllus | BAA04510.1 | D17586 | Oryza sativa |
| | | | CAA70817.1 | Y09604 | Hordeum vulgare |

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|-----------------|----------|---------------------------|-----------------|----------|---------------------------|
| BAA04511.1 | D17587 | Oryza sativa | AAB03266.1 | U44773 | Zea mays |
| BAA01757.1 | D10985 | Oryza sativa | CAA52293.1 | X74217 | Zea mays |
| BAB19126.1 | AP002839 | Oryza sativa | AAF28800.1 | AF112888 | Catharanthus roseus |
| BAA94235.1 | AP001633 | Oryza sativa | AAD02839.1 | AF082991 | Avena sativa |
| CAB71127.1 | AJ271659 | Cicer arietinum | AAG00614.1 | AF293849 | Secale cereale |
| AA32064.1 | U49741 | Vigna radiata | CAA40057.1 | X56733 | Trifolium repens |
| AA32062.1 | U49382 | Vigna radiata | CAA55196.1 | X78433 | Avena sativa |
| CAA92216.1 | Z68130 | Pisum sativum | AAB71381.1 | U95298 | Manihot esculenta |
| SEQ ID NO. 990 | | | AAK07429.1 | AF321287 | Musa acuminata |
| AAD16018.1 | AF081514 | Taxus canadensis | CAA79989.2 | Z21977 | Brassica napus |
| SEQ ID NO. 991 | | | CAA57913.1 | X82577 | Brassica napus |
| AAF21901.1 | AF109392 | Brassica napus | AAB38784.1 | U72154 | Brassica nigra |
| SEQ ID NO. 995 | | | CAC08209.1 | AJ005950 | Cicer arietinum |
| CAA42596.1 | X59970 | Brassica napus | AAA84906.1 | U28047 | Oryza sativa |
| BAA88179.1 | AP000836 | Oryza sativa | SEQ ID NO. 1004 | | |
| CAA65502.1 | X96727 | Nicotiana tabacum | AAF19196.1 | AF206320 | Musa acuminata |
| CAA47720.1 | X67310 | Solanum tuberosum | AAB71208.1 | U63550 | Fragaria x ananassa |
| CAA74777.1 | Y14432 | Nicotiana tabacum | AAF63756.1 | AF243475 | Vitis vinifera |
| CAA74776.1 | Y14431 | Nicotiana tabacum | AAF19195.1 | AF206319 | Musa acuminata |
| CAA76076.1 | Y16126 | Lycopersicon esculentum | CAA70735.1 | Y09541 | Zinnia elegans |
| SEQ ID NO. 1003 | | | CAA63496.1 | X92943 | Musa acuminata |
| AAA91166.1 | U39228 | Prunus avium | AAA86241.1 | U41472 | Medicago sativa |
| BAA11831.1 | D83177 | Costus speciosus | CAA47630.1 | X67158 | Nicotiana tabacum |
| AAF04007.1 | AF163097 | Dalbergia cochinchinensis | CAA43414.1 | X61102 | Nicotiana tabacum |
| AAF34650.1 | AF221526 | Prunus serotina | CAA43413.1 | X61101 | Nicotiana tabacum |
| AAF03675.1 | AF149311 | Rauvolfia serpentina | CAA47631.1 | X67159 | Nicotiana tabacum |
| AAG25897.1 | AF170087 | Cucurbita pepo | SEQ ID NO. 1005 | | |
| BAA78708.1 | AB003089 | Polygonum tinctorium | AAK07429.1 | AF321287 | Musa acuminata |
| CAA64442.1 | X94986 | Manihot esculenta | AAC69619.1 | AF072736 | Pinus contorta |
| AAB22162.1 | S35175 | Manihot esculenta | AAE04007.1 | AF163097 | Dalbergia cochinchinensis |
| AAD09850.1 | U44087 | Zea mays | BAA78708.1 | AB003089 | Polygonum tinctorium |
| AAC49177.1 | U33817 | Sorghum bicolor | BAA11831.1 | D83177 | Costus speciosus |
| AAC69619.1 | AF072736 | Pinus contorta | AAF03675.1 | AF149311 | Rauvolfia serpentina |
| CAA40058.1 | X56734 | Trifolium repens | AAG00614.1 | AF293849 | Secale cereale |
| AA87339.1 | I41869 | Hordeum vulgare | AAA91166.1 | U39228 | Prunus avium |
| AA65946.1 | U25157 | Zea mays | AAG5897.1 | AF170087 | Cucurbita pepo |
| AAD10503.1 | U33816 | Zea mays | AAF34650.1 | AF221526 | Prunus serotina |
| | | | AAC49177.1 | U33817 | Sorghum bicolor |
| | | | AAB22162.1 | S35175 | Manihot esculenta |

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| AAA87339.1 | I41869 | Hordeum vulgare | BAA93465.1 | AB028077 | Physcomitrella patens |
| CRA64442.1 | X94986 | Manihot esculenta | AAD37699.1 | AF145730 | Oryza sativa |
| AAD02839.1 | AF082991 | Avena sativa | BAA21017.1 | D26578 | Daucus carota |
| AAB03266.1 | U44773 | Zea mays | CRA63222.1 | X92489 | Glycine max |
| AAD09850.1 | U44087 | Zea mays | SEQ ID NO. 1007 | | |
| CRA52293.1 | X74217 | Zea mays | AAB88617.1 | AF034946 | Zea mays |
| AAD10503.1 | U33816 | Zea mays | AAA34125.1 | L23762 | Lycopersicon esculentum |
| AAA65946.1 | U25157 | Zea mays | AAA64427.1 | L29077 | Pisum sativum |
| AAF28800.1 | AF112888 | Catharanthus roseus | CRA51821.1 | X73419 | Lycopersicon esculentum |
| CRA40058.1 | X56734 | Trifolium repens | AAD51109.1 | AF176040 | Mesembryanthemum crystalli |
| CRA55196.1 | X78433 | Avena sativa | AAB02168.1 | U15971 | Oryza sativa |
| CRA40057.1 | X56733 | Trifolium repens | AAA86089.1 | U17250 | Brassica oleracea |
| CAR79989.2 | Z21977 | Brassica napus | AAD42941.1 | AF091621 | Catharanthus roseus |
| AAB71381.1 | U95298 | Manihot esculenta | BAA21006.1 | D17786 | Oryza sativa |
| CRA57913.1 | X82577 | Brassica napus | AAF73016.1 | AF262934 | Avicennia marina |
| AAB38784.1 | U72154 | Brassica nigra | AAA34310.1 | M62720 | Triticum aestivum |
| AAA84906.1 | U28047 | Oryza sativa | BAB40310.1 | AB026055 | Nicotiana tabacum |
| CAC08209.1 | AJ005950 | Cicer arietinum | BAB40311.1 | AB026056 | Nicotiana tabacum |
| SEQ ID NO. 1006 | | | CAB58111.1 | X82938 | Lycopersicon esculentum |
| AAG43283.1 | AF139210 | Oryza sativa | CAA06493.1 | AJ005348 | Cicer arietinum |
| AAD37698.1 | AF145729 | Oryza sativa | AAC12662.1 | AF032468 | Zea mays |
| AAF01765.1 | AF184278 | Glycine max | BAA90392.1 | AP001081 | Oryza sativa |
| AAD37695.1 | AF145726 | Oryza sativa | CAA05772.1 | AJ002959 | Zea mays |
| AAF19980.1 | AF211193 | Oryza sativa | AAF22280.1 | AF165420 | Mesembryanthemum crystallinum |
| AAK31270.1 | AC079890 | Oryza sativa | AAF03236.1 | AF180143 | Glycine max |
| CAA65456.2 | X96681 | Oryza sativa | AAG23847.1 | AY004247 | Lycopersicon esculentum |
| BAA93466.1 | AB028078 | Physcomitrella patens | AAB63513.1 | AF008910 | Prunus armeniaca |
| CRA64491.1 | X95193 | Pimpinella brachycarpa | AAA34309.1 | M28059 | Triticum aestivum |
| CRA62608.1 | X91212 | Lycopersicon esculentum | CAA10494.1 | AJ131733 | Pseudotsuga menziesii |
| CRA64152.1 | X94375 | Pimpinella brachycarpa | AAC32141.1 | AF051240 | Picea mariana |
| BAA05625.1 | D26576 | Daucus carota | SEQ ID NO. 1008 | | |
| AAA63768.2 | AF339748 | Helianthus annuus | CRA63222.1 | X92489 | Glycine max |
| AAD38144.1 | AF139497 | Prunus armeniaca | CAA64221.1 | X94449 | Pimpinella brachycarpa |
| CAA06728.1 | AJ005833 | Craterostigma plantagineum | CAA64152.1 | X94375 | Pimpinella brachycarpa |
| AAD37700.1 | AF145731 | Oryza sativa | CAA64491.1 | X95193 | Pimpinella brachycarpa |
| BAA93462.1 | AB028074 | Physcomitrella patens | CAA65456.2 | X96681 | Oryza sativa |
| BAA93463.1 | AB028075 | Physcomitrella patens | AAF19980.1 | AF211193 | Oryza sativa |
| BAB18171.1 | AB042769 | Zinnia elegans | AAK31270.1 | AC079890 | Oryza sativa |
| BAA05624.1 | D26575 | Daucus carota | AAK74017.1 | U30475 | Glycine max |
| BAA93467.1 | AB028079 | Physcomitrella patens | | | |

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| BAA93463.1 | AB028075 | Physcomitrella patens | AAF34538.1 | AF195817 | Beta vulgaris |
| AAD37695.1 | AF145726 | Oryza sativa | AAF34527.1 | AF195806 | Vigna radiata |
| AAD37700.1 | AF145731 | Oryza sativa | AAF34530.1 | AF195809 | Vigna radiata |
| CAA06728.1 | AJ005833 | Craterostigma plantagineum | AAF34526.1 | AF195805 | Lens culinaris |
| AAD37696.1 | AF145727 | Oryza sativa | AAF45142.1 | AF195818 | Glycine max |
| BAB18169.1 | AB042767 | Zinnia elegans | AAB94591.1 | AF022462 | Glycine max |
| CAA06717.1 | AJ005820 | Craterostigma plantagineum | AAF45143.1 | AF195819 | Glycine max |
| BAA05622.1 | D26573 | Daucus carota | AAF34533.1 | AF195812 | Pisum sativum |
| BAA93462.1 | AB028074 | Physcomitrella patens | AAF34534.1 | AF195813 | Lupinus albus |
| AAD37698.1 | AF145729 | Oryza sativa | AAF34537.1 | AF195816 | Beta vulgaris |
| CAA64417.1 | X94947 | Lycopersicon esculentum | AAF34536.1 | AF195815 | Trifolium repens |
| BAA21017.1 | D26578 | Daucus carota | AAF34525.1 | AF195804 | Lens culinaris |
| BAA05624.1 | D26575 | Daucus carota | AAF34535.1 | AF195814 | Trifolium repens |
| AAF01764.2 | AF184277 | Glycine max | CAB56503.1 | AJ238612 | Catharanthus roseus |
| BAA93468.1 | AB028080 | Physcomitrella patens | CAA50155.1 | X70824 | Solanum melongena |
| BAA05625.1 | D26576 | Daucus carota | AAD56282.1 | AF155332 | Petunia x hybrida |
| BAA93467.1 | AB028079 | Physcomitrella patens | AAC39318.1 | AF029858 | Sorghum bicolor |
| AAF01765.1 | AF184278 | Glycine max | BAB40323.1 | AB037244 | Asparagus officinalis |
| BAA93461.1 | AB028073 | Physcomitrella patens | SEQ ID NO. 1010 | | |
| BAB18171.1 | AB042769 | Zinnia elegans | AAC37479.1 | L41355 | Brassica rapa |
| BAA93464.1 | AB028076 | Physcomitrella patens | AAA96316.1 | U51119 | Brassica rapa |
| BAA05623.1 | D26574 | Daucus carota | CAA79954.1 | Z21954 | Vigna unguiculata |
| BAA93466.1 | AB028078 | Physcomitrella patens | BAA19610.1 | D64115 | Glycine max |
| BAA93460.1 | AB028072 | Physcomitrella patens | BAA19608.1 | D31700 | Glycine max |
| AAD37697.1 | AF145728 | Oryza sativa | AAF23127.1 | AF198389 | Lycopersicon esculentum |
| SEQ ID NO. 1009 | | | CAA60610.1 | X87126 | Zea mays |
| BAA12159.1 | D83968 | Glycine max | BAA09666.1 | D63342 | Zea mays |
| BAA13076.1 | D86351 | Glycine max | BAA01472.1 | D10622 | Zea mays |
| AAD38930.1 | AF135485 | Glycine max | AAF23126.1 | AF198388 | Lycopersicon esculentum |
| BAA84071.1 | AB028151 | Antirrhinum majus | CAA89697.1 | Z49697 | Ricinus communis |
| BAA22423.1 | AB001380 | Glycyrrhiza echinata | AAA97905.1 | U51853 | Glycine max |
| BAA74466.1 | AB022733 | Glycyrrhiza echinata | BAA69582.1 | AP001073 | Oryza sativa |
| BAA84072.1 | AB028152 | Torenia hybrida | AAF72202.1 | AF265551 | Manihot esculenta |
| BAA93632.1 | AB024931 | Lotus japonicus | BAA07327.1 | D38130 | Zea mays |
| AAF34532.1 | AF195811 | Trifolium pratense | CAA11899.1 | AJ224331 | Castanea sativa |
| AAF34529.1 | AF195808 | Vigna radiata | CAA60634.1 | X87168 | Sorghum bicolor |
| AAF34528.1 | AF195807 | Vigna radiata | BAB21558.1 | AB037156 | Coix lacryma-jobi |
| AAF34531.1 | AF195810 | Trifolium pratense | BAA95416.1 | AB039673 | Helianthus annuus |
| AAD38929.1 | AF135484 | Glycine max | AAA33903.1 | J03469 | Oryza sativa |
| BAA76380.1 | AB023636 | Glycyrrhiza echinata | AAB24010.1 | S49967 | Oryza |

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| AAB66355.1 | U54702 | Oryza sativa | BAB18937.1 | AB052228 | Cucumis melo var. reticulata |
| AAF64480.1 | AF241536 | Ipomoea batatas | BAA85817.1 | AB026498 | Cucumis sativus |
| AAD13812.1 | AF117334 | Ipomoea batatas | AAC31123.1 | AF032448 | Malus x domestica |
| AAA97906.1 | U51854 | Glycine max | AAF08300.1 | AF113748 | Musa acuminata |
| AAB71505.1 | U82220 | Pyrus communis | AAF61919.1 | AF227742 | Mangifera indica |
| AAK15090.1 | AF240007 | Sesamum indicum | AAD37577.1 | AF141929 | Pelargonium x hortorum |
| AAA97907.1 | U51855 | Glycine max | AAD37576.1 | AF141928 | Pelargonium x hortorum |
| CAA72790.1 | Y12068 | Hordeum vulgare | AAC02213.1 | AF043084 | Lycopersicon esculentum |
| AAA32672.1 | L16624 | Ambrosia artemisiifolia | AAA85479.1 | U41103 | Lycopersicon esculentum |
| AAK30004.1 | AY028994 | Dianthus caryophyllus | AAB68819.1 | U63291 | Rumex palustris |
| AAD33907.1 | AF143677 | Artemisia vulgaris | CAAG9646.1 | Y08359 | Rumex palustris |
| BAB18768.1 | AB038394 | Triticum aestivum | AAC39497.1 | AF047476 | Brassica oleracea |
| BAB18766.1 | AB038392 | Triticum aestivum | AAB97160.1 | AF022727 | Nicotiana tabacum |
| CAA50437.1 | X71124 | Carica papaya | AAC02214.1 | AF043085 | Lycopersicon esculentum |
| AAC69278.1 | AF064734 | Dianthus caryophyllus | AAB39386.1 | U47279 | Lycopersicon esculentum |
| BAB18767.1 | AB038393 | Triticum aestivum | CAB76929.1 | AJ276294 | Citrus sinensis |
| CAA40860.1 | X57658 | Oryza sativa | BAA96745.1 | AB035806 | Dianthus caryophyllus |
| AAA33911.1 | J05595 | Oryza sativa | AAD31396.1 | AF118843 | Lycopersicon esculentum |
| BAB18769.1 | AB038395 | Triticum aestivum | AAC31213.3 | AF026267 | Nicotiana tabacum |
| BAB18765.1 | AB038391 | Triticum aestivum | BAB13718.1 | AB040406 | Zea mays |
| AAA16120.1 | L16450 | Solanum tuberosum | AAD31397.1 | AF118844 | Lycopersicon esculentum |
| AAC32853.1 | AF083253 | Lycopersicon esculentum | BAA85819.1 | AB026500 | Cucumis sativus |
| AAF23128.1 | AF198390 | Lycopersicon esculentum | BAA90552.1 | AB031029 | Prunus mume |
| AAG38521.1 | AF283536 | Citrus x paradisi | BAA90551.1 | AB031028 | Prunus mume |
| CAA48037.1 | X67844 | Solanum tuberosum | AAD45346.1 | AF159172 | Rosa hybrid cultivar |
| SEQ ID NO. 1011 | | | SEQ ID NO. 1013 | | |
| AAC31157.1 | AF047477 | Brassica oleracea | AAG34797.1 | AF243362 | Glycine max |
| AAG41977.1 | AF311942 | Carica papaya | AAG34798.1 | AF243363 | Glycine max |
| AAB94773.1 | AF039746 | Pisum sativum | AAG34803.1 | AF243368 | Glycine max |
| CAA06723.1 | AJ005829 | Pisum sativum | AAF64450.1 | AF239928 | Euphorbia esula |
| AAD03598.1 | AF098272 | Vigna radiata | AAG34801.1 | AF243366 | Glycine max |
| BAA37137.1 | AB015497 | Passiflora edulis | AAG34804.1 | AF243369 | Glycine max |
| BAB13735.1 | AB049128 | Cucumis melo var. reticulatus | AAG34796.1 | AF243361 | Glycine max |
| BAA85818.1 | AB026499 | Cucumis sativus | AAG34809.1 | AF243374 | Glycine max |
| AAD26899.1 | AF055894 | Phalaenopsis sp. 'True Lady' | AAG34807.1 | AF243372 | Glycine max |
| AAB72193.1 | AF013979 | Oryza sativa | AAG34810.1 | AF243375 | Glycine max |
| AAB96765.2 | AF039921 | Nicotiana tabacum | AAG34844.1 | AF244701 | Zea mays |
| AAD12777.1 | AF051938 | Solanum tuberosum | AAG34831.1 | AF244688 | Zea mays |
| AAF28893.1 | AF124527 | Prunus persica | AAC18566.1 | AF048978 | Glycine max |
| BAA37136.1 | AB015496 | Passiflora edulis | AAG34832.1 | AF244689 | Zea mays |

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| AAG34808.1 | AF243373 | Glycine max | SEQ ID NO. 1018 | Citrus sinensis |
| AAG34837.1 | AF244694 | Zea mays | CAA87068.1 | Impatiens balsamina |
| AAG34800.1 | AF243365 | Glycine max | AAK15005.1 | Mesembryanthemum crystalli |
| AAG34836.1 | AF244693 | Zea mays | AAB61593.1 | Zea mays |
| CAA04391.1 | AJ000923 | Carica papaya | AAA33462.1 | Spinacia oleracea |
| CAA71784.1 | Y10820 | Glycine max | AAA34028.1 | Chlamydomonas reinhardtii |
| AAG34849.1 | AF244706 | Zea mays | AAC49171.1 | Chlamydomonas reinhardtii |
| AAA68430.1 | J03679 | Solanum tuberosum | AAA33085.1 | Chlamydomonas reinhardtii |
| AAG34802.1 | AF243367 | Glycine max | CAA26281.1 | Silene latifolia subsp. al |
| CAC24549.1 | AJ296343 | Cichorium intybus x Cichorium | AAA33665.1 | Pisum sativum |
| endivia | | | CAA52980.1 | Triticum aestivum |
| CAA09187.1 | AJ010448 | Alopecurus myosuroides | AAA33461.1 | Zea mays |
| AAF22518.1 | AF118925 | Papaver somniferum | BAA32348.1 | Zea mays |
| CAA09188.1 | AJ010449 | Alopecurus myosuroides | BAA06456.1 | Oryza sativa |
| AAF22517.1 | AF118924 | Papaver somniferum | AAA33460.1 | Zea mays |
| AAF22647.1 | AF193439 | Lycopersicon esculentum | AAA33459.1 | Zea mays |
| | | | BAA06436.1 | Oryza sativa |
| | | | CAA99756.1 | Lycopersicon esculentum |
| SEQ ID NO. 1016 | | | BAA19865.1 | Oryza sativa |
| AAC36698.1 | AF075580 | Mesembryanthemum crystallinum | AAD02175.1 | Capsicum annuum |
| CAA72341.1 | Y11607 | Medicago sativa | BAA90760.1 | Ipomoea nil |
| AAG43835.1 | AF213455 | Zea mays | CAA73265.1 | Physcomitrella patens |
| AAD17804.1 | AF092431 | Lotus japonicus | AAB65699.1 | Oryza sativa |
| AAD17805.1 | AF092432 | Lotus japonicus | | |
| AAC36697.1 | AF075579 | Mesembryanthemum crystallinum | SEQ ID NO. 1020 | |
| CAB90633.1 | AJ277743 | Fagus sylvatica | AAF74567.1 | Solanum tuberosum |
| CAC10358.1 | AJ277086 | Nicotiana tabacum | AAF74566.1 | Nicotiana tabacum |
| CAC10359.1 | AJ277087 | Nicotiana tabacum | AAF74565.1 | Spinacia oleracea |
| AAC36700.1 | AF075582 | Mesembryanthemum crystallinum | AAF74568.1 | Zea mays |
| CAC09575.1 | AJ298987 | Fagus sylvatica | AAG43998.1 | Apium graveolens var. dulce |
| CAB90634.1 | AJ277744 | Fagus sylvatica | BAB19864.1 | Oryza sativa |
| AAC35951.1 | AF079355 | Mesembryanthemum crystallinum | CAA09419.1 | Lycopersicon esculentum |
| AAD11430.1 | AF097667 | Mesembryanthemum crystallinum | CAB52689.1 | Lycopersicon esculentum |
| AAB93832.1 | U81960 | Zea mays | CAA53192.1 | Chlorella kessleri |
| AAC26828.1 | AF075603 | Oryza sativa | CAA68813.1 | Chlorella kessleri |
| AAC36699.1 | AF075581 | Mesembryanthemum crystallinum | AAA79761.1 | Ricinus communis |
| CAC09576.1 | AJ298988 | Fagus sylvatica | CAB06079.1 | Picea abies |
| | | | CAB07812.1 | Vicia faba |
| SEQ ID NO. 1017 | | | CAA47324.1 | Nicotiana tabacum |
| CAA9516.1 | 271997 | Medicago sativa | CAA39036.1 | Chlorella kessleri |
| AAB36543.1 | U77935 | Phaseolus vulgaris | AAB06594.1 | Medicago truncatula |

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| CAA04511.1 | AJ001061 | Vitis vinifera | CAC19810.1 | AJ292343 | Solanum tuberosum |
| AAA79857.1 | L08188 | Ricinus communis | BAA85845.1 | AB026545 | Hyoscyamus niger |
| CAA70777.1 | Y09590 | Vitis vinifera | AAB09776.1 | L20485 | Hyoscyamus niger |
| BAB19863.1 | AB052884 | Oryza sativa | CAA45866.1 | X64566 | Cuphea lanceolata |
| BAB19862.1 | AB052883 | Oryza sativa | CAA45793.1 | X64463 | Brassica napus |
| CAB52690.1 | AJ132225 | Lycopersicon esculentum | AAB20114.2 | S60064 | Brassica napus |
| BAA85398.1 | AP000615 | Oryza sativa | CAA74176.1 | Y13861 | Nicotiana tabacum |
| CAB52688.1 | AJ132223 | Lycopersicon esculentum | CAA05879.1 | AJ003124 | Petunia x hybrida |
| AAD55054.1 | AF173655 | Beta vulgaris | CAA74177.1 | Y13862 | Nicotiana tabacum |
| | | | CAA05816.1 | AJ003025 | Oryza sativa |
| SEQ ID NO. 1021 | | | AAB82767.1 | U89509 | Zea mays |
| CAA96516.1 | Z71997 | Medicago sativa | CAA64729.1 | X95462 | Brassica napus |
| AAB36543.1 | U77935 | Phaseolus vulgaris | AAB82766.1 | U89510 | Hordeum vulgare |
| | | | | | |
| SEQ ID NO. 1022 | | | SEQ ID NO. 1026 | | |
| AAG43549.1 | AF211531 | Nicotiana tabacum | CAB51555.1 | AJ242531 | Triticum aestivum |
| AAG43548.1 | AF211530 | Nicotiana tabacum | BAA90749.1 | AB030956 | Oryza sativa |
| BAA78738.1 | AB023482 | Oryza sativa | CAB51557.1 | AJ242530 | Zea mays |
| CAC12822.1 | AJ299252 | Nicotiana tabacum | | | |
| AAE76898.1 | AF274033 | Atriplex hortensis | SEQ ID NO. 1027 | | |
| BAB16083.1 | AB036883 | Oryza sativa | AAC63113.1 | AF000307 | Brassica napus |
| BAB03248.1 | AB037183 | Oryza sativa | AAC63111.1 | AF000305 | Brassica napus |
| AAC24587.1 | AF071893 | Prunus armeniaca | AAC63112.1 | AF000306 | Brassica napus |
| AAE23899.1 | AF193803 | Oryza sativa | AAA33342.2 | M84135 | Flaveria chloraefolia |
| AAK01089.1 | AF298231 | Hordeum vulgare | AAA61638.1 | U10275 | Flaveria bidentis |
| CAB96899.1 | AJ251249 | Catharanthus roseus | AAA33343.1 | M84136 | Flaveria chloraefolia |
| CAB96900.1 | AJ251250 | Catharanthus roseus | AAA87399.1 | U10277 | Flaveria bidentis |
| BAA07321.1 | D38123 | Nicotiana tabacum | | | |
| AAF63205.1 | AF245119 | Mesembryanthemum crystallinum | SEQ ID NO. 1029 | | |
| AAG43545.1 | AF211527 | Nicotiana tabacum | AAC98969.1 | AF047428 | Oryza sativa |
| AAC62619.1 | AF057373 | Nicotiana tabacum | AAC98962.1 | AF045571 | Oryza sativa |
| BAA99376.1 | AP002526 | Oryza sativa | AAD31844.1 | AF133118 | Oryza sativa |
| | | | BAB08194.1 | AP002539 | Oryza sativa |
| | | | BAA96755.1 | AP002521 | Oryza sativa |
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| SEQ ID NO. 1025 | | | SEQ ID NO. 1031 | | |
| AAA33280.1 | L20475 | Datura stramonium | AAF66242.1 | AJ243180 | Lycopersicon esculentum |
| AAA33281.1 | L20473 | Datura stramonium | CAA80963.1 | Z25471 | Pisum sativum |
| CAC34420.1 | AJ307584 | Solanum tuberosum | AAD10251.1 | AF031195 | Triticum aestivum |
| BAA13547.1 | D88156 | Hyoscyamus niger | AAC64163.1 | AF093537 | Zea mays |
| BAA85844.1 | AB026544 | Hyoscyamus niger | CAA10134.1 | AJ012693 | Cicer arietinum |
| AAA33282.1 | L20474 | Datura stramonium | | | |
| CAB52307.1 | AJ245634 | Solanum tuberosum | | | |

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| AAF56243.1 | AF243181 | Lycopersicon esculentum | AAC39512.1 | AF043284 | Gossypium hirsutum |
| CAB65280.1 | AJ248323 | Medicago sativa subsp. x varia | CAC19184.1 | AJ291817 | Cicer arietinum |
| AAC32448.1 | U76296 | Spinacia oleracea | AAF35901.1 | AF230332 | Zinnia elegans |
| SEQ ID NO. 1034 | | | CAA69105.1 | Y07782 | Oryza sativa |
| BAA23143.1 | D87261 | Oryza sativa | CAB46492.1 | AJ243340 | Lycopersicon esculentum |
| BAA23142.1 | D87260 | Oryza sativa | CAB43197.1 | AJ239068 | Lycopersicon esculentum |
| SEQ ID NO. 1035 | | | AAC64201.1 | AF096776 | Lycopersicon esculentum |
| AAG45501.1 | AY012513 | Populus balsamifera subsp. | AAB38074.1 | U30477 | Oryza sativa |
| trichocarpa | | | AAF32410.1 | AF230277 | Triphysaria versicolor |
| AAG43046.1 | AY012515 | Populus x canescens | AAB81662.1 | U85246 | Oryza sativa |
| SEQ ID NO. 1039 | | | CAA06271.2 | AJ004997 | Lycopersicon esculentum |
| AAA97411.1 | U51918 | Pisum sativum | AAF32409.1 | AF230276 | Triphysaria versicolor |
| SEQ ID NO. 1042 | | | CAA04385.1 | AJ000885 | Brassica napus |
| CAA42234.1 | X59714 | Zea mays | AAD13633.1 | AF059489 | Lycopersicon esculentum |
| SEQ ID NO. 1045 | | | AAF17571.1 | AF202120 | Regnellidium diphyllum |
| BAA88182.1 | AP000836 | Oryza sativa | AAG13983.1 | AF297522 | Prunus avium |
| SEQ ID NO. 1046 | | | AAC96081.1 | AF049354 | Nicotiana tabacum |
| AAC96077.1 | AF049350 | Nicotiana tabacum | AAD49956.1 | AF167360 | Rumex palustris |
| AAC96079.1 | AF049352 | Nicotiana tabacum | AAF32411.1 | AF230278 | Triphysaria versicolor |
| AAC96078.1 | AF049351 | Nicotiana tabacum | AAF35902.1 | AF230333 | Zinnia elegans |
| AAB37749.1 | U30460 | Cucumis sativus | AAD13632.1 | AF059488 | Lycopersicon esculentum |
| AAG32920.1 | AF184232 | Lycopersicon esculentum | BAB32732.1 | AB049406 | Eustoma grandiflorum |
| AAG01875.1 | AF291659 | Striga asiatica | CAC19183.1 | AJ291816 | Cicer arietinum |
| AAD47901.1 | AF085330 | Pinus taeda | CAC06433.1 | AJ276007 | Festuca pratensis |
| AAF21101.1 | AF159563 | Fragaria x ananassa | AAG32921.1 | AF184233 | Lycopersicon esculentum |
| AAB40637.1 | U64893 | Pinus taeda | AAF62182.1 | AF247164 | Oryza sativa |
| AAB40635.1 | U64891 | Pinus taeda | CAC06432.1 | AJ276006 | Festuca pratensis |
| AAB40634.1 | U64890 | Pinus taeda | SEQ ID NO. 1047 | | |
| AAB40636.1 | U64892 | Pinus taeda | BAA37171.1 | AB022674 | Oryza sativa |
| BAB19676.1 | AB029083 | Prunus persica | BAA37170.1 | AB022673 | Oryza sativa |
| AAC63088.1 | U82123 | Lycopersicon esculentum | AAA34031.1 | J02849 | Spinacia oleracea |
| AAG13982.1 | AF297521 | Prunus avium | CAA44226.1 | X62368 | Nicotiana tabacum |
| AAC33530.1 | AF038815 | Prunus armeniaca | CAA44214.1 | X62339 | Nicotiana tabacum |
| AAB37746.1 | U30382 | Cucumis sativus | CAA48414.1 | X68340 | Secale cereale |
| AAC33529.1 | U93167 | Prunus armeniaca | AAB21989.1 | S93166 | Chloroplast Nicotiana |
| | | | sylvestris | | |
| | | | CAA48400.1 | X68325 | Secale cereale |
| | | | AAD54786.1 | AF137379 | Chloroplast Nephroselmis |
| | | | olivacea | | |
| | | | AAB66886.1 | AF010581 | Oryza sativa |

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| BAA57991.1 | AB001684 | Chlorella vulgaris | AAA47618.1 | U73916 | Linum usitatissimum |
| CAB38448.1 | AJ236874 | Plastid Prototheca wickerhamii | AAD25974.1 | AF093647 | Linum usitatissimum |
| | | | AAD25975.1 | AF093648 | Linum usitatissimum |
| SEQ ID NO. 1059 | | | AAG09952.1 | AF175389 | Glycine max |
| CAA09001.1 | AJ010110 | Chlamydomonas reinhardtii | AAA91022.1 | U27081 | Linum usitatissimum |
| CAA34615.1 | X16619 | Chlamydomonas reinhardtii | AAD25968.1 | AF093641 | Linum usitatissimum |
| AAF43427.1 | AF233374 | Volvox carteri | AAA91021.1 | U27081 | Linum usitatissimum |
| | | | AAD25969.1 | AF093642 | Linum usitatissimum |
| SEQ ID NO. 1060 | | | AAG01051.1 | AF175394 | Glycine max |
| AAA50763.1 | U15605 | Nicotiana glutinosa | AAD25965.1 | AF093638 | Linum usitatissimum |
| CAA08798.1 | AJ009720 | Solanum tuberosum | AAD25973.1 | AF093646 | Linum usitatissimum |
| AAG09951.1 | AF175388 | Glycine max | AAD25970.1 | AF093643 | Linum usitatissimum |
| AAK28810.1 | AF310964 | Linum usitatissimum | AAD25967.1 | AF093640 | Linum usitatissimum |
| AAK28812.1 | AF310968 | Linum usitatissimum | AAD25971.1 | AF093644 | Linum usitatissimum |
| AAK28811.1 | AF310966 | Linum usitatissimum | AAD25972.1 | AF093645 | Linum usitatissimum |
| AAK28803.1 | AF310958 | Linum usitatissimum | AAD25976.1 | AF093649 | Linum usitatissimum |
| AAK28806.1 | AF310960 | Linum usitatissimum | | | |
| AAK28804.1 | AF310959 | Linum usitatissimum | SEQ ID NO. 1061 | | |
| AAK28809.1 | AF310962 | Linum usitatissimum | AAA34025.1 | M31480 | Spinacia oleracea |
| AAK28808.1 | AF310961 | Linum usitatissimum | AAB41696.1 | U69142 | Spinacia oleracea |
| AAK28805.1 | AF310960 | Linum usitatissimum | CAA49425.1 | X69770 | Atriplex hortensis |
| CAA08797.1 | AJ009719 | Solanum tuberosum | CAA41376.1 | X58462 | Beta vulgaris |
| AAG43546.1 | AF211528 | Nicotiana tabacum | CAA41377.1 | X58463 | Beta vulgaris |
| CAC35339.1 | AJ310164 | Linum usitatissimum | BAB18543.1 | AB043539 | Avicennia marina |
| CAC35328.1 | AJ310153 | Linum usitatissimum | BAA21098.1 | AB001348 | Oryza sativa |
| CAC35337.1 | AJ310162 | Linum usitatissimum | AAB70010.1 | AF017150 | Amaranthus hypochondriacus |
| CAC35326.1 | AJ310151 | Linum usitatissimum | AAF73828.1 | AF162665 | Oryza sativa |
| CAC35332.1 | AJ310157 | Linum usitatissimum | BAB19052.1 | AB044537 | Oryza sativa |
| CAC35336.1 | AJ310161 | Linum usitatissimum | AAB58165.1 | AF000132 | Amaranthus hypochondriacus |
| CAC35325.1 | AJ310150 | Linum usitatissimum | BAB18544.1 | AB043540 | Avicennia marina |
| CAC35327.1 | AJ310152 | Linum usitatissimum | BAA05466.1 | D26448 | Hordeum vulgare |
| CAC35330.1 | AJ310155 | Linum usitatissimum | BAA96793.1 | AB030939 | Oryza sativa |
| CAC35338.1 | AJ310163 | Linum usitatissimum | CAA71003.1 | Y09876 | Nicotiana tabacum |
| CAC35329.1 | AJ310154 | Linum usitatissimum | AAG43988.1 | AF215823 | Zea mays |
| CAC35334.1 | AJ310159 | Linum usitatissimum | BAA96794.1 | AB037421 | Oryza sativa |
| CAC35333.1 | AJ310158 | Linum usitatissimum | AAC49268.1 | U12196 | Sorghum bicolor |
| CAC35321.1 | AJ310150 | Linum usitatissimum | CAA53076.1 | X75327 | Pisum sativum |
| CAC35331.1 | AJ310156 | Linum usitatissimum | AAB47571.1 | U87848 | Nicotiana plumbaginifolia |
| CAC35323.1 | AJ310150 | Linum usitatissimum | AAF08296.1 | AF196292 | Apium graveolens |
| AAD25966.1 | AF093639 | Linum usitatissimum | AAC49267.1 | U12195 | Sorghum bicolor |
| AAG01052.1 | AF175395 | Glycine max | CAA53075.1 | X75326 | Zea mays |

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| AAG43027.1 | AF323586 | Oryza sativa | AAC24961.1 | AF009337 | Tradescantia virginiana |
| AAC03055.1 | AF045770 | Oryza sativa | AAF23900.1 | AF194413 | Oryza sativa |
| AAB33843.1 | S77096 | Brassica napus | AAF23901.2 | AF194414 | Oryza sativa |
| | | | AAC78558.1 | AF030879 | Solanum tuberosum |
| SEQ ID NO. 1062 | | | CAA57157.1 | X81394 | Oryza sativa |
| CRA76555.1 | Y16953 | Sinapis alba | AAC25423.1 | AF072908 | Nicotiana tabacum |
| CRA58772.1 | X83920 | Brassica napus | BAA12715.1 | D85039 | Zea mays |
| CRA63073.1 | X92102 | Raphanus sativus | AAAG9507.1 | U28376 | Zea mays |
| AAB033378.1 | U27107 | Brassica napus | BAA81751.1 | AB017517 | Marchantia polymorpha |
| AAD42937.1 | AF084971 | Catharanthus roseus | BAA81749.1 | AB017515 | Marchantia polymorpha |
| CRA88492.1 | Z48602 | Nicotiana tabacum | CAA39936.1 | X56599 | Daucus carota |
| CRA88493.1 | Z48603 | Nicotiana tabacum | AAB49984.1 | U90262 | Cucurbita pepo |
| AAC49398.1 | U46217 | Petroselinum crispum | BAA81750.1 | AB017516 | Marchantia polymorpha |
| AAB80169.1 | U10270 | Zea mays | BAA81748.1 | AB017515 | Marchantia polymorpha |
| AAB40291.1 | U42208 | Oryza sativa | AAD17800.1 | AF090835 | Mesembryanthemum crystallinum |
| AAB00098.1 | I01449 | Glycine max | AAB80693.1 | U69174 | Glycine max |
| CAA58774.1 | X83922 | Brassica napus | AAD28192.2 | AF115406 | Solanum tuberosum |
| CAA58773.1 | X83921 | Brassica napus | BAA13440.1 | D87707 | Ipomoea batatas |
| AAK14790.1 | AY027510 | Catharanthus roseus | CAA07481.1 | AJ007366 | Zea mays |
| AAC49556.1 | U04295 | Oryza sativa | AAB88537.1 | AF035944 | Fragaria x ananassa |
| AAD42938.1 | AF084972 | Catharanthus roseus | CAA65500.1 | X96723 | Medicago sativa |
| AA334293.1 | M28704 | Triticum aestivum | AAAG1682.1 | I27484 | Zea mays |
| CAA71768.1 | Y10809 | Petroselinum crispum | AAB70706.1 | U82087 | Tortula ruralis |
| CAA52896.1 | X74942 | Lycopersicon esculentum | BAB16888.1 | AB042550 | Oryza sativa |
| CAA71770.1 | Y10810 | Petroselinum crispum | BAA85396.1 | AP000615 | Oryza sativa |
| BAA10928.1 | D64051 | Triticum aestivum | BAA12338.1 | D84408 | Zea mays |
| CAA52897.1 | X74943 | Lycopersicon esculentum | CAA57156.1 | X81393 | Oryza sativa |
| CAA52895.1 | X74941 | Lycopersicon esculentum | AAC05270.1 | AF048691 | Oryza sativa |
| CAB62402.1 | Y15165 | Zea mays | AAC49405.1 | U08140 | Vigna radiata |
| AAAI7488.1 | U07933 | Triticum aestivum | BAA13232.1 | D87042 | Zea mays |
| AAAG8429.1 | M63999 | Triticum aestivum | AAB80692.1 | U69173 | Glycine max |
| AAAI9103.1 | U10466 | Triticum aestivum | AAF21062.1 | AF216527 | Dunaliella tertiolecta |
| CAA71687.1 | Y10685 | Glycine max | AAK26164.1 | AY027885 | Cucumis sativus |
| SEQ ID NO. 1063 | | | AAA33443.1 | L15390 | Zea mays |
| CAA58750.1 | X83869 | Daucus carota | CAA89202.1 | Z49233 | Chlamydomonas eugametos |
| AAB47181.1 | S82324 | Zea mays | AAG46110.1 | AC073166 | Oryza sativa |
| BAA12691.1 | D84507 | Zea mays | BAA02698.1 | D13436 | Oryza sativa |
| BAA12692.1 | D84508 | Zea mays | BAA90814.1 | AP001168 | Oryza sativa |
| AAG01179.1 | AF289237 | Zea mays | CAB46228.1 | Y18055 | Arachis hypogaea |
| BAA22410.1 | D38452 | Zea mays | AAC49008.1 | U24188 | Lilium longiflorum |
| | | | AAF19401.1 | AF203479 | Glycine max |

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| AA052098.1 | U70923 | Nicotiana tabacum | CAA06999.1 | AJ006378 | Lycopersicon esculentum |
| SEQ ID NO. 1064 | | | CAA07000.1 | AJ006379 | Lycopersicon esculentum |
| CAB43337.1 | AJ006348 | Fragaria x ananassa | CAA67430.1 | X98930 | Lycopersicon esculentum |
| AAC95009.1 | AF074923 | Fragaria x ananassa | CAA67429.1 | X98929 | Lycopersicon esculentum |
| CAA65827.1 | X97189 | Capsicum annuum | CAA76725.1 | Y17276 | Lycopersicon esculentum |
| AAA69909.1 | U13055 | Lycopersicon esculentum | CAA71234.1 | Y10149 | Lycopersicon esculentum |
| AAC12684.1 | U76725 | Pinus radiata | CAA06414.1 | AJ005173 | Lycopersicon esculentum |
| AAA80495.1 | U20590 | Lycopersicon esculentum | CAA06412.1 | AJ005171 | Lycopersicon esculentum |
| BAA85150.1 | AB032830 | Pisum sativum | CAA76727.1 | Y17278 | Lycopersicon esculentum |
| AAC12685.1 | U76756 | Pinus radiata | CAB67120.1 | Y18932 | Lycopersicon esculentum |
| BAB32662.1 | AB055886 | Atriplex lentiformis | CAA06413.1 | AJ005172 | Lycopersicon esculentum |
| BAA77239.1 | AB025796 | Populus alba | CAA07250.1 | AJ006786 | Lycopersicon esculentum |
| CAB59900.1 | AJ010950 | Capsicum annuum | BAB21149.1 | AP002899 | Oryza sativa |
| CAA65828.1 | X97190 | Capsicum annuum | CAB67119.1 | Y18931 | Lycopersicon esculentum |
| BAB39483.1 | AB049200 | Populus alba | CAA64566.1 | X95270 | Lycopersicon esculentum |
| AAA96135.1 | I41046 | Pisum sativum | CAA76724.1 | Y17275 | Lycopersicon esculentum |
| AAC62241.1 | AF077339 | Lycopersicon esculentum | CAA59964.1 | X85975 | Alnus glutinosa |
| CAA72133.1 | Y11268 | Lycopersicon esculentum | CAA76726.1 | Y17277 | Lycopersicon esculentum |
| CAA65600.1 | X96856 | Prunus persica | CAA06997.1 | AJ006376 | Lycopersicon esculentum |
| CAA65597.1 | X96853 | Prunus persica | CAA07001.1 | AJ006380 | Lycopersicon esculentum |
| BAB39482.1 | AB049199 | Populus alba | CAA07059.1 | AJ006480 | Lycopersicon esculentum |
| AAD08699.1 | AF098292 | Lycopersicon esculentum | CAA06998.1 | AJ006377 | Lycopersicon esculentum |
| CAA65826.1 | X97188 | Capsicum annuum | CAA07060.1 | AJ006481 | Lycopersicon esculentum |
| CAA60737.1 | X87323 | Capsicum annuum | CAA07062.1 | AJ006483 | Lycopersicon esculentum |
| AAC78504.1 | U34754 | Phaseolus vulgaris | BAB03290.1 | AB037371 | Oryza sativa |
| AAA02563.1 | M57400 | Phaseolus vulgaris | AAG38994.1 | AF160513 | Glycine max |
| CAB43938.1 | AJ006349 | Fragaria x ananassa | AAD02075.3 | AF036960 | Glycine max |
| BAA96207.1 | AP002094 | Oryza sativa | AAG09442.1 | AF200467 | Oryza sativa |
| AAA69908.1 | U13054 | Lycopersicon esculentum | AAF13299.1 | AF181496 | Lycopersicon esculentum |
| BAA96209.1 | AP002094 | Oryza sativa | BAA04839.1 | D21815 | Lilium longiflorum |
| CAA11301.1 | AJ223386 | Fragaria x ananassa | AAF31406.1 | AF201883 | Gossypioideis kirkii |
| AAC49704.1 | U78526 | Lycopersicon esculentum | CAA10987.1 | AJ222782 | Hordeum vulgare |
| BAA94257.1 | AB040769 | Hordeum vulgare | SEQ ID NO. 1066 | | |
| CAB51903.1 | AJ242807 | Brassica napus | BAA82556.1 | AB030083 | Populus nigra |
| AAA20082.1 | U00730 | Glycine max | AAD21872.1 | AF078082 | Phaseolus vulgaris |
| CAA11302.1 | AJ223387 | Fragaria x ananassa | AAF43408.1 | AF230515 | Oryza sativa subsp. japonica |
| BAA21111.1 | D88417 | Gossypium hirsutum | CAA73134.1 | Y12531 | Brassica oleracea |
| CAA80627.1 | Z23081 | Vigna radiata | AAB93834.1 | U82481 | Zea mays |
| | | | BAA92954.1 | AP001551 | Oryza sativa |
| SEQ ID NO. 1065 | | | AAK21965.1 | AY028699 | Brassica napus |

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|-----------------|----------|-------------------------------|-----------------|----------|-------------------------|
| AAAF63205.1 | AF245119 | Mesembryanthemum crystallinum | CAB96874.1 | AJ277164 | Malus x domestica |
| BAA07321.1 | D38123 | Nicotiana tabacum | CAA0571.1 | AJ002958 | Cicer arietinum |
| BAB16083.1 | AB036883 | Oryza sativa | CAA65475.1 | X96714 | Prunus dulcis |
| BAB03248.1 | AB037183 | Oryza sativa | AAA33493.1 | J04176 | Zea mays |
| CAB96900.1 | AJ251250 | Catharanthus roseus | CAA65477.1 | X96716 | Prunus dulcis |
| CAB96899.1 | AJ251249 | Catharanthus roseus | AAB70538.1 | AF017358 | Oryza sativa |
| BAA99376.1 | AP002526 | Oryza sativa | AAF35184.1 | AF195863 | Gossypium hirsutum |
| AAC62619.1 | AF057373 | Nicotiana tabacum | AAK20395.1 | AF334185 | Triticum aestivum |
| AAG433548.1 | AF211530 | Nicotiana tabacum | AAA86694.1 | U18127 | Hordeum vulgare |
| AAG433549.1 | AF211531 | Nicotiana tabacum | AAG27707.1 | AF302788 | Triticum aestivum |
| AAK01089.1 | AF298231 | Hordeum vulgare | AAA75599.1 | U15153 | Gossypium hirsutum |
| SEQ ID NO. 1071 | | | AAB34774.1 | S78173 | Gossypium hirsutum |
| AAA34181.1 | M98466 | Lycopersicon esculentum | CAA85484.1 | Z37115 | Hordeum vulgare |
| AAB39547.1 | U63374 | Lycopersicon esculentum | AAD46683.1 | AF171094 | Lilium longiflorum |
| AAB38497.1 | U79772 | Mercurialis annua | AAB96834.1 | M64746 | Daucus carota |
| SEQ ID NO. 1072 | | | CAA63407.1 | X92748 | Beta vulgaris |
| AAA73945.1 | L33904 | Brassica oleracea | AAB70541.1 | AF017361 | Oryza sativa |
| AAC63372.1 | AF093751 | Brassica oleracea | AAA33494.1 | M57249 | Zea mays |
| AA773947.1 | L33906 | Brassica oleracea | CAA91436.1 | Z66529 | Hordeum vulgare |
| AAA64310.1 | U22174 | Brassica napus | AAB70540.1 | AF017360 | Oryza sativa |
| AAB37228.1 | U22105 | Brassica napus | CAA69949.1 | Y08691 | Oryza sativa |
| AAA73946.1 | L33905 | Brassica oleracea | AAB18815.1 | Y07295 | Oryza sativa |
| AAA73948.1 | L33907 | Brassica oleracea | CAA48621.1 | X68654 | Hordeum vulgare |
| AAA32995.1 | L29767 | Brassica oleracea | SEQ ID NO. 1073 | | |
| AAF35185.1 | AF195864 | Gossypium hirsutum | AAD46406.1 | AF096250 | Lycopersicon esculentum |
| AAK28533.1 | AF329829 | Corylus avellana | AAD10057.1 | AF110519 | Lycopersicon esculentum |
| AAA74624.1 | U31766 | Oryza sativa | AAD10056.1 | AF110518 | Lycopersicon esculentum |
| AAB70539.1 | AF017359 | Oryza sativa | AAG31141.1 | AF305911 | Oryza sativa |
| AAG29777.1 | AF228333 | Gossypium hirsutum | AAG31142.1 | AF305912 | Hordeum vulgare |
| AAF35186.1 | AF195865 | Gossypium hirsutum | CAA06334.1 | AJ005077 | Lycopersicon esculentum |
| AAC00499.1 | AF044204 | Gossypium hirsutum | AAK30005.1 | AY029067 | Rosa hybrid cultivar |
| AAD09107.1 | AF101038 | Brassica napus | AA34002.1 | M67449 | Glycine max |
| CAA50661.1 | X71668 | Sorghum bicolor | AAK11734.1 | AY027437 | Arachis hypogaea |
| AAF26449.1 | AF221501 | Prunus avium | CAC09580.1 | AJ298992 | Fagus sylvatica |
| AAB06443.1 | U66105 | Zea mays | AAF76189.1 | AF271206 | Rosa hybrid cultivar |
| CAA80809.1 | Z23271 | Oryza sativa | AAF78015.1 | AF238471 | Oryza sativa |
| AAA34032.1 | M58635 | Spinacia oleracea | AAD43962.1 | U78762 | Triticum aestivum |
| AAF26450.1 | AF221502 | Malus x domestica | CAA61510.1 | X89226 | Oryza sativa |
| CAA50660.1 | X71667 | Sorghum bicolor | AAD46415.1 | AF100765 | Oryza sativa |

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|-----------------|----------|---------------------------|-----------------|----------|-----------------------------|
| AAG00510.1 | AF285172 | Phaseolus vulgaris | CAC10514.1 | AJ299019 | Samanea saman |
| BAB39437.1 | AP003338 | Oryza sativa | CAB54856.1 | AJ132686 | Zea mays |
| BAB39434.1 | AP003338 | Oryza sativa | CAA56175.1 | X79779 | Solanum tuberosum |
| AAF78020.1 | AF238476 | Oryza sativa | CAA71598.1 | Y10579 | Vicia faba |
| AAF78019.1 | AF238475 | Oryza sativa | SEQ ID NO. 1077 | | |
| AAF68399.1 | AF237569 | Oryza sativa | AAG31173.1 | AF315714 | Ipomoea nil |
| AAF68397.1 | AF237567 | Oryza sativa | AAC98912.1 | AF029984 | Lycopersicon esculentum |
| AAD44031.1 | AF085166 | Hordeum vulgare | CAB89693.1 | AJ276591 | Pisum sativum |
| BAA94516.1 | AP001800 | Oryza sativa | CAB94800.1 | AJ289773 | Pisum sativum |
| AAF66615.1 | AF142596 | Nicotiana tabacum | CAA70768.1 | Y09579 | Pisum sativum |
| AAF91323.1 | AF244889 | Glycine max | CAB94801.1 | AJ289774 | Pisum sativum |
| AAF91324.1 | AF244890 | Glycine max | BAA94422.1 | AB040053 | Oryza sativa subsp. japoni- |
| AAG25966.1 | AF302082 | Nicotiana tabacum | CAB89694.1 | AJ276592 | Pisum sativum |
| SEQ ID NO. 1075 | | | | | |
| AAF40306.1 | AF156667 | Vigna radiata | SEQ ID NO. 1078 | | |
| CAA68193.1 | X99937 | Spinacia oleracea | AAD11481.1 | U51191 | Glycine max |
| BAA03763.1 | D16247 | Nicotiana sylvestris | AAD11482.1 | U51192 | Glycine max |
| AAF75791.1 | AF271892 | Pisum sativum | AAA65637.1 | I13654 | Lycopersicon esculentum |
| AAD20980.1 | AF079782 | Zea mays | AAA65636.1 | I13653 | Lycopersicon esculentum |
| BAA95704.1 | AB042643 | Oryza sativa | CRA76374.2 | Y16776 | Spinacia oleracea |
| BAA95705.1 | AB042644 | Oryza sativa | BAA03644.1 | D14997 | Oryza sativa |
| AAG48833.1 | AC084218 | Oryza sativa | CAB80502.1 | Z22920 | Spirodela polyrrhiza |
| SEQ ID NO. 1076 | | | | | |
| AAF33670.1 | AF079872 | Nicotiana tabacum | BAA07664.1 | D42065 | Nicotiana tabacum |
| AAF33669.1 | AF079871 | Nicotiana tabacum | AAF63024.1 | AF244921 | Spinacia oleracea |
| AAB53255.1 | U65390 | Nicotiana tabacum | BAA07663.1 | D42064 | Nicotiana tabacum |
| CAA65254.1 | X96390 | Lycopersicon esculentum | BAA77387.1 | AB024437 | Scutellaria baicalensis |
| BAR84085.1 | AB032074 | Nicotiana paniculata | CAC21393.1 | AJ401276 | Zea mays |
| AAF36832.1 | AF207745 | Triticum aestivum | AAD11483.1 | U51193 | Glycine max |
| CAB62555.1 | AJ249962 | Daucus carota | AAD11484.1 | U51194 | Glycine max |
| CAA68912.1 | Y07632 | Zea mays | CAA62226.1 | X90693 | Medicago sativa |
| CAC05488.1 | AJ271446 | Populus tremula x Populus | CAA62227.1 | X90694 | Medicago sativa |
| tremuloides | | | AAB41811.1 | I36157 | Medicago sativa |
| CAC05489.1 | AJ271447 | Populus tremula x Populus | CAA64413.1 | X94943 | Lycopersicon esculentum |
| tremuloides | | | BAA89584.1 | AP001073 | Oryza sativa |
| AAD39492.1 | AF145272 | Samanea saman | BAA90365.1 | AP001081 | Oryza sativa |
| BAA96150.1 | AP002092 | Oryza sativa | BAA01950.1 | D11337 | Vigna angularis |
| BAA96192.1 | AP002093 | Oryza sativa | AAB67737.1 | I77080 | Stylosanthes humilis |
| AAD16278.1 | AF099095 | Samanea saman | AAA32676.1 | M37637 | Arachis hypogaea |
| | | | AAF63027.1 | AF244924 | Spinacia oleracea |
| | | | CAA62225.1 | X90692 | Medicago sativa |

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|-----------------|----------|-------------------------|-----------------|----------|----------------------------|
| CAC21391.1 | AJ401274 | Zea mays | AAF91322.1 | AF244888 | Glycine max |
| AAD37427.1 | AF149277 | Phaseolus vulgaris | AAK11568.1 | AF318492 | Lycopersicon hirsutum |
| CAB94692.1 | AJ242742 | Ipomoea batatas | AAB09771.1 | U67422 | Zea mays |
| AAB41810.1 | I36156 | Medicago sativa | AAF76307.1 | AF220602 | Lycopersicon pimpinellifol |
| BAA82307.1 | AB027753 | Nicotiana tabacum | AAF76314.1 | AF220603 | Lycopersicon esculentum |
| AAF65464.2 | AF247700 | Oryza sativa | AAB47424.1 | U59317 | Lycopersicon pimpinellifol |
| BAA92500.1 | AF001383 | Oryza sativa | BAA92954.1 | AF001551 | Oryza sativa |
| AAD37430.1 | AF149280 | Phaseolus vulgaris | AAB47422.1 | U59318 | Lycopersicon esculentum |
| CAA62615.1 | X91232 | Mécurialis annua | AAF91324.1 | AF244890 | Glycine max |
| AAC98519.1 | AF007211 | Glycine max | | | |
| AAB97734.1 | AF014502 | Glycine max | SEQ ID NO. 1080 | | |
| CRA39486.1 | X56011 | Triticum aestivum | AAB86850.1 | AF031540 | Fritillaria agrestis |
| BAA94962.1 | AB042103 | Asparagus officinalis | AAC84135.1 | AF101422 | Cichorium intybus |
| AAD37429.2 | AF149279 | Phaseolus vulgaris | BAA02159.1 | D12634 | Oryza sativa |
| AAF63026.1 | AF244923 | Spinacia oleracea | AAA63515.1 | M63704 | Oryza sativa |
| CAA71488.1 | Y10462 | Spinacia oleracea | AAB70265.1 | AF017367 | Oryza sativa |
| AAD37375.1 | AF145349 | Glycine max | AAA33084.1 | M35173 | Chlamydomonas reinhardtii |
| CAA76376.1 | Y16778 | Spinacia oleracea | CAB16954.1 | Z99829 | Chlamydomonas reinhardtii |
| BAA14143.1 | D90115 | Armoracia rusticana | CAA79708.1 | Z21499 | Stellaria longipes |
| CAA59485.1 | X85228 | Triticum aestivum | | | |
| | | | SEQ ID NO. 1081 | | |
| SEQ ID NO. 1079 | | | BAA02159.1 | D12634 | Oryza sativa |
| AAG16628.1 | AY007545 | Brassica napus | AAA63515.1 | M63704 | Oryza sativa |
| AAK21965.1 | AY028699 | Brassica napus | AAB86850.1 | AF031540 | Fritillaria agrestis |
| AAG03090.1 | AC073405 | Oryza sativa | AAC84135.1 | AF101422 | Cichorium intybus |
| BAA94509.1 | AB041503 | Populus nigra | AAB70265.1 | AF017367 | Oryza sativa |
| BAA94510.1 | AB041504 | Populus nigra | AAA33084.1 | M35173 | Chlamydomonas reinhardtii |
| BAA78764.1 | AB023482 | Oryza sativa | CAB16954.1 | Z99829 | Chlamydomonas reinhardtii |
| AAC61805.1 | U28007 | Lycopersicon esculentum | CAA79708.1 | Z21499 | Stellaria longipes |
| AAF43496.1 | AF131222 | Lophopyrum elongatum | | | |
| AAK11674.1 | AF339747 | Lophopyrum elongatum | SEQ ID NO. 1082 | | |
| AAF91337.1 | AF249318 | Glycine max | BAB08188.1 | AF002539 | Oryza sativa |
| AAF91336.1 | AF249317 | Glycine max | CAAB70815.1 | Y09602 | Hordeum vulgare |
| AAC27894.1 | AF023164 | Zea mays | CAB59202.1 | X78878 | Hordeum vulgare |
| AAF66615.1 | AF142596 | Nicotiana tabacum | CAAB55478.1 | X78877 | Hordeum vulgare |
| CAB51834.1 | 00069 | Oryza sativa | AAD22150.1 | AF061282 | Sorghum bicolor |
| AAD21872.1 | AF078082 | Phaseolus vulgaris | CAB58992.1 | X78876 | Hordeum vulgare |
| AAC27895.1 | AF023165 | Zea mays | AAD22151.1 | AF061282 | Sorghum bicolor |
| AAB61708.1 | U93048 | Daucus carota | AAF44708.1 | AF242849 | Lycopersicon esculentum |
| CAA97692.1 | Z73295 | Catharanthus roseus | AAD22164.1 | AF061282 | Sorghum bicolor |
| AAA33915.1 | L27821 | Oryza sativa | BAA04510.1 | D17586 | Oryza sativa |

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| CAC19933.1 | AJ131739 | Cuphea lanceolata |
| AAG43857.1 | AF213476 | Iris germanica |
| AAG43858.1 | AF213477 | Iris germanica |
| AAG43861.1 | AF213480 | Iris tectorum |
| AAG43860.1 | AF213479 | Iris tectorum |
| BAA83582.1 | AP000399 | Oryza sativa |
| CAB60830.1 | AJ131740 | Cuphea lanceolata |
| AAC49180.1 | U38189 | Cuphea palustris |
| AAC49784.1 | U56104 | Cuphea wrightii |
| AAC49783.1 | U56103 | Cuphea wrightii |
| CAC19934.1 | AJ131741 | Cuphea lanceolata |
| AAC49179.1 | U38188 | Cuphea palustris |
| AAC72881.1 | AF062399 | Cuphea hookeriana |
| AAC49269.1 | U39834 | Cuphea hookeriana |
| AAD42220.1 | AF147879 | Elaeis guineensis |
| AAC49151.1 | U31813 | Cinnamomum camphora |
| AAA34215.1 | M94159 | Umbellularia californica |
| AAC49001.1 | U17097 | Umbellularia californica |
| CAA06001.1 | AJ003221 | Solanum tuberosum |
| SEQ ID NO. 1084 | | Pisum sativum |
| BAB41080.1 | AB052729 | Nicotiana tabacum |
| AAA34085.1 | M93436 | Nicotiana tabacum |
| AAA34054.1 | M96432 | |
| SEQ ID NO. 1085 | | Lycopersicon esculentum |
| CAA06334.1 | AJ005077 | Oryza sativa |
| AAG31141.1 | AF305911 | Hordeum vulgare |
| AAG31142.1 | AF305912 | Rosa hybrid cultivar |
| AAK30005.1 | AY029067 | Lycopersicon esculentum |
| AAD46406.1 | AF096250 | Lycopersicon esculentum |
| AAD10057.1 | AF110519 | Lycopersicon esculentum |
| AAD10056.1 | AF110518 | Lycopersicon esculentum |
| AAA34002.1 | M67449 | Glycine max |
| AAK11734.1 | AY027437 | Arachis hypogaea |
| CAC09580.1 | AJ298992 | Fagus sylvatica |
| CAA97692.1 | Z73295 | Catharanthus roseus |
| AAF59906.1 | AF197947 | Glycine max |
| AAF59905.1 | AF197946 | Glycine max |
| CAA08995.1 | AJ010091 | Brassica napus |
| CAB51834.1 | 00069 | Oryza sativa |
| Y09603 | Hordeum vulgare | |
| J03897 | Hordeum vulgare | |
| AF248647 | Lycopersicon pennellii | |
| AF006080 | Solanum berthaultii | |
| AF006078 | Solanum berthaultii | |
| AF006079 | Solanum berthaultii | |
| AF141384 | Matricaria chamomilla | |
| D17587 | Oryza sativa | |
| D10985 | Oryza sativa | |
| Y09604 | Hordeum vulgare | |
| AF001633 | Oryza sativa | |
| AJ271659 | Cicer arietinum | |
| AF002839 | Oryza sativa | |
| U49382 | Vigna radiata | |
| U49741 | Vigna radiata | |
| Z68130 | Pisum sativum | |
| SEQ ID NO. 1083 | | Brassica rapa |
| AAC49002.1 | U17098 | Brassica napus |
| X73850 | CRAA52070.1 | Brassica napus |
| X73849 | CRAA52069.1 | Brassica napus |
| X87842 | CRAA61111.1 | Brassica napus |
| AF062401 | AAC72883.1 | Cuphea hookeriana |
| M95659 | AAA33020.1 | Carthamus tinctorius |
| U92876 | ABA51523.1 | Garcinia mangostana |
| M96568 | AAA33019.1 | Carthamus tinctorius |
| AF318288 | AAG33064.1 | Capsicum chinense |
| AF213478 | AAG43859.1 | Iris germanica |
| U92877 | ABA51524.1 | Garcinia mangostana |
| AF110462 | AAD28187.1 | Elaeis guineensis |
| AJ278479 | CAC14164.1 | Brassica juncea |
| U17076 | AAAC48990.1 | Cuphea hookeriana |
| U65642 | AAAB71729.1 | Myristica fragrans |
| U92878 | AAAB51525.1 | Garcinia mangostana |
| AF062400 | AAC72882.1 | Cuphea hookeriana |
| AF036565 | AAAB88824.1 | Helianthus annuus |
| AF143095 | AAD33895.1 | Elaeis guineensis |
| AF141382 | AAD33870.1 | Elaeis oleifera |
| X76561 | CAA54060.1 | Cuphea lanceolata |
| AF034266 | AAAD01982.1 | Gossypium hirsutum |
| AF076535 | AAAF02215.1 | Gossypium hirsutum |

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|-----------------|----------|------------------------------|-----------------|----------|---------------------------|
| CAA08997.1 | AJ010093 | Brassica napus | AAB81662.1 | U85246 | Oryza sativa |
| AAF34436.1 | AF172282 | Oryza sativa | AAG13983.1 | AF297522 | Prunus avium |
| AAG25966.1 | AF302082 | Nicotiana tabacum | AAG32409.1 | AF230276 | Triphysaria versicolor |
| BAA06538.1 | D31737 | Nicotiana tabacum | AAG32921.1 | AF184233 | Lycopersicon esculentum |
| AAF76189.1 | AF271206 | Rosa hybrid cultivar | BAB32732.1 | AB049406 | Eustoma grandiflorum |
| BAA84787.1 | AP000559 | Oryza sativa | AAF32411.1 | AF230278 | Triphysaria versicolor |
| BAA83373.1 | AP000391 | Oryza sativa | AAF35902.1 | AF230333 | Zinnia elegans |
| AAF66615.1 | AF142596 | Nicotiana tabacum | AAB38074.1 | U30477 | Oryza sativa |
| AAF91322.1 | AF244888 | Glycine max | AAC96080.1 | AF049353 | Nicotiana tabacum |
| AAD21872.1 | AF078082 | Phaseolus vulgaris | AAF17570.1 | AF202119 | Marsilea quadrifolia |
| CAA61510.1 | X89226 | Oryza sativa | CAC06433.1 | AJ276007 | Festuca pratensis |
| AAF91323.1 | AF244889 | Glycine max | AAD13633.1 | AF059489 | Lycopersicon esculentum |
| AAF91324.1 | AF244890 | Glycine max | CAC19183.1 | AJ291816 | Cicer arietinum |
| AAF43394.1 | AF230501 | Oryza sativa subsp. japonica | AAF62181.1 | AF247163 | Oryza sativa |
| AAK16409.1 | AF320086 | Zea mays | AAF62180.1 | AF247162 | Oryza sativa |
| AAK21965.1 | AY028699 | Brassica napus | CAB46492.1 | AJ243340 | Lycopersicon esculentum |
| BAB39437.1 | AP003338 | Oryza sativa | BAA88200.1 | AP000837 | Oryza sativa |
| AAK11568.1 | AF318492 | Lycopersicon hirsutum | AAF32410.1 | AF230277 | Triphysaria versicolor |
| SEQ ID NO. 1086 | | | AAB37749.1 | U30460 | Cucumis sativus |
| BAA85400.1 | AP000615 | Oryza sativa | CAA04385.1 | AJ000885 | Brassica napus |
| SEQ ID NO. 1088 | | | AAF17571.1 | AF202120 | Regnellidium diphyllum |
| AAF35901.1 | AF230332 | Zinnia elegans | AAD13632.1 | AF059488 | Lycopersicon esculentum |
| CAC19184.1 | AJ291817 | Cicer arietinum | CAA06271.2 | AJ004997 | Lycopersicon esculentum |
| AAG13982.1 | AF297521 | Prunus avium | AAC63088.1 | U82123 | Lycopersicon esculentum |
| BAB19676.1 | AB029083 | Prunus persica | AAC96077.1 | AF049350 | Nicotiana tabacum |
| AAC33529.1 | U93167 | Prunus armeniaca | AAF62182.1 | AF247164 | Oryza sativa |
| AAC33530.1 | AF038815 | Prunus armeniaca | CAC18802.1 | AJ289154 | Glycine max |
| AAD47901.1 | AF085330 | Pinus taeda | AAC96078.1 | AF049351 | Nicotiana tabacum |
| AAB37746.1 | U30382 | Cucumis sativus | AAG01875.1 | AF291659 | Striga asiatica |
| AAF21101.1 | AF159563 | Fragaria x ananassa | CAA69105.1 | Y07782 | Oryza sativa |
| AAB40634.1 | U64890 | Pinus taeda | AAC96079.1 | AF049352 | Nicotiana tabacum |
| AAB40637.1 | U64893 | Pinus taeda | SEQ ID NO. 1089 | | Populus tremula x Populus |
| AAB40635.1 | U64891 | Pinus taeda | AAD02848.1 | AF086839 | |
| CAB43197.1 | AJ239068 | Lycopersicon esculentum | tremuloides | | Betula pendula |
| AAB40636.1 | U64892 | Pinus taeda | CAB66329.1 | AJ279687 | Citrus unshiu |
| AAC64201.1 | AF096776 | Lycopersicon esculentum | BAA36555.1 | AB011798 | Pisum sativum |
| AAD49956.1 | AF167360 | Rumex palustris | AAC77357.1 | U79562 | Lycopersicon esculentum |
| AAC96081.1 | AF049354 | Nicotiana tabacum | CAB61887.1 | AJ250003 | Citrus unshiu |
| AAC39512.1 | AF043284 | Gossypium hirsutum | BAA36556.1 | AB011799 | Malus x domestica |
| | | | AAB16804.1 | U68560 | |

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|-------------------|----------|-------------------------------|-----------------|----------|-------------------------|
| BAB40808.1 | AB058921 | Nicotiana suaveolens x | AAF37266.1 | AF220405 | Vitis riparia |
| Nicotiana tabacum | | | AAB36223.1 | S81261 | Brassica napus |
| BAB40809.1 | AB058922 | Nicotiana suaveolens x | AAB36222.1 | S81261 | Brassica napus |
| Nicotiana tabacum | | | AAC49266.1 | U33885 | Brassica napus |
| AAC32147.1 | AF051247 | Picea mariana | AAC49265.1 | U33884 | Brassica napus |
| CAB56223.1 | AJ133276 | Hordeum vulgare | AAD28439.1 | AF120092 | Nicotiana tabacum |
| CAB56224.1 | AJ133277 | Hordeum vulgare | | | |
| AAC24568.2 | AF055909 | Zea mays | SEQ ID NO. 1103 | | |
| | | | BAA90508.1 | AP001111 | Oryza sativa |
| | | | BAA90507.1 | AP001111 | Oryza sativa |
| | | | CAA94437.1 | Z70524 | Spirodela polyrrhiza |
| | | | BAA83352.1 | AP000391 | Oryza sativa |
| | | Spinacia oleracea | | | |
| | | Mesembryanthemum crystallinum | SEQ ID NO. 1104 | | |
| | | Cucurbita sp. | AAD25300.1 | AF088276 | Lycopersicon esculentum |
| | | Oryza sativa | CAA63704.1 | X93301 | Oryza sativa |
| | | Lycopersicon esculentum | AAD25225.1 | AF088279 | Potamogeton crispus |
| | | Medicago sativa | AAD24966.1 | AF109150 | Lycopersicon esculentum |
| | | Nicotiana tabacum | | | |
| | | Lactuca sativa | | | |
| | | | SEQ ID NO. 1105 | | |
| | | Nicotiana sylvestris | AAC05983.1 | AF049708 | Glycine max |
| | | Pisum sativum | AAAT74360.1 | L33912 | Zea mays |
| | | Vigna radiata | AAC05981.1 | AF049706 | Chloroplast Glycine max |
| | | Spinacia oleracea | AAAL6972.1 | L11529 | Daucus carota |
| | | Zea mays | BAA11417.1 | D78573 | Oryza sativa |
| | | Oryza sativa | AAAT74361.1 | L33913 | Zea mays |
| | | Oryza sativa | AAD41796.1 | AF135862 | Glycine max |
| | | | BAA95630.1 | AB042521 | Oryza sativa |
| | | | SEQ ID NO. 1106 | | |
| | | Brassica napus | AAG25928.1 | AF260919 | Petunia x hybrida |
| | | Brassica napus | AAG25927.1 | AF260918 | Petunia x hybrida |
| | | Panax ginseng | AAB00686.1 | U18348 | Phaseolus vulgaris |
| | | Lycopersicon esculentum | AAC28907.1 | U18349 | Phaseolus vulgaris |
| | | | AAD15818.1 | AF061107 | Zea mays |
| | | Tulipa gesneriana | CAB92300.1 | AJ251719 | Zea mays |
| | | Tulipa gesneriana | AAC49219.1 | U39860 | Oryza sativa |
| | | Tulipa gesneriana | AAC39455.1 | AF020545 | Petunia x hybrida |
| | | Mesembryanthemum crystallinum | AAC49212.1 | U39863 | Oryza australiensis |
| | | | AAC49216.1 | U39865 | Oryza officinalis |
| | | | AAC49213.1 | U39864 | Oryza eichingeri |
| | | | SEQ ID NO. 1091 | | |
| | | | BAA03763.1 | D16247 | |
| | | | AAF75791.1 | AF271892 | |
| | | | AAF40306.1 | AF156667 | |
| | | | CAB68193.1 | X99937 | |
| | | | AAD20980.1 | AF079782 | |
| | | | BAA95704.1 | AB042643 | |
| | | | BAA95705.1 | AB042644 | |
| | | | SEQ ID NO. 1094 | | |
| | | | CAB06773.1 | AJ005931 | |
| | | | CAB06770.1 | AJ005928 | |
| | | | BAA24448.1 | AB003516 | |
| | | | CAB06223.1 | AJ004923 | |
| | | | SEQ ID NO. 1096 | | |
| | | | AAG14455.1 | AF283707 | |
| | | | AAG14456.1 | AF283708 | |
| | | | AAG14454.1 | AF283706 | |
| | | | AAC08401.1 | AF053564 | |
| | | | SEQ ID NO. 1102 | | |

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| AAD56411.1 | AF185269 | Tulipa gesneriana | BAB39155.1 | AB048713 | Pisum sativum |
| SEQ ID NO. 1107 | | | AAG13663.1 | AF263457 | Zea mays |
| AAB69757.1 | U75644 | Lycopersicon esculentum | BAA90816.1 | AP001168 | Oryza sativa |
| AAC49666.1 | U83708 | Lycopersicon esculentum | AAC98090.1 | AF067400 | Zea mays |
| AAB38796.1 | U73203 | Nicotiana glutinosa | SEQ ID NO. 1114 | | |
| SEQ ID NO. 1109 | | | CAA05249.1 | AJ002204 | Zea mays |
| BAA33531.1 | D83583 | Nicotiana tabacum | CAC03739.1 | AJ251568 | Zea mays |
| BAA33796.1 | AB010717 | Nicotiana tabacum | CAC04001.1 | AJ251018 | Zea mays |
| AAG59996.1 | AY017473 | Glycine max | CAC04002.1 | AJ251019 | Zea mays |
| BAA23641.1 | D50679 | Zea mays | SEQ ID NO. 1115 | | |
| AAC24584.1 | AF071890 | Prunus armeniaca | AAD22518.1 | AF001136 | Pinus radiata |
| CAA70137.1 | Y08937 | Chlamydomonas reinhardtii | SEQ ID NO. 1119 | | |
| AAA74456.1 | U10419 | Phaseolus vulgaris | CAA06925.1 | AJ006228 | Nicotiana tabacum |
| BAA09122.1 | D50556 | Oryza sativa | SEQ ID NO. 1122 | | |
| AAC17127.1 | AF065616 | Capsicum annuum | CAB61752.1 | AJ275318 | Cicer arietinum |
| AAA60450.1 | M23456 | Zea mays | CAC14890.1 | AJ295156 | Phragmites australis |
| CAC06095.1 | AJ293240 | Lotus japonicus | AAB68605.1 | U82433 | Prunus armeniaca |
| AAB50233.1 | U90429 | Glycine max | SEQ ID NO. 1124 | | |
| CAA46940.1 | X66145 | Nicotiana tabacum | AAD16018.1 | AF081514 | Taxus canadensis |
| CAA46942.1 | X66147 | Nicotiana tabacum | SEQ ID NO. 1125 | | |
| CAA34893.1 | X17031 | Spinacia oleracea | CAC34339.1 | AJ308597 | Solanum tuberosum |
| CAA42690.1 | X60093 | Betula pendula | AAF97863.1 | AF175507 | Eucalyptus camaldulensis |
| CAA46941.1 | X66146 | Nicotiana tabacum | CAA12225.1 | AJ224926 | Solanum tuberosum |
| AAC34042.1 | AF082602 | Leavenworthia crassa | AAD16279.1 | AF099096 | Samanea saman |
| AAC34043.1 | AF082603 | Leavenworthia uniflora | SEQ ID NO. 1127 | | |
| AAC34044.1 | AF082604 | Leavenworthia crassa | CAA67728.1 | X99348 | Vigna radiata |
| AAC34046.1 | AF082606 | Leavenworthia uniflora | SEQ ID NO. 1133 | | |
| AAC34045.1 | AF082605 | Leavenworthia stylota | AAC36700.1 | AF075582 | Mesembryanthemum crystallinum |
| AAC34047.1 | AF082607 | Leavenworthia stylota | AAG43835.1 | AF213455 | Zea mays |
| AAA96730.1 | L23855 | Glycine max | AAD17804.1 | AF092431 | Lotus japonicus |
| AAC34048.1 | AF082608 | Leavenworthia uniflora | AAC36698.1 | AF075580 | Mesembryanthemum crystallinum |
| SEQ ID NO. 1110 | | | AAC36697.1 | AF075579 | Mesembryanthemum crystallinum |
| AAG14455.1 | AF283707 | Tulipa gesneriana | AAD17805.1 | AF092432 | Lotus japonicus |
| AAG14456.1 | AF283708 | Tulipa gesneriana | | | |
| AAG14454.1 | AF283706 | Tulipa gesneriana | | | |
| AAC08401.1 | AF053564 | Mesembryanthemum crystallinum | | | |
| SEQ ID NO. 1111 | | | | | |

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| CAA72341.1 | Y11607 | Medicago sativa | AAA33945.1 | J03919 | Glycine max |
| CAC10358.1 | AJ277086 | Nicotiana tabacum | AAA33944.1 | J03920 | Glycine max |
| CAC10359.1 | AJ277087 | Nicotiana tabacum | CAA48299.1 | X68217 | Pisum sativum |
| CAC09575.1 | AJ298987 | Fagus sylvatica | CAA48298.1 | X68216 | Pisum sativum |
| AAC26828.1 | AF075603 | Oryza sativa | AAD50278.1 | AF169830 | Glycine max |
| AAC36699.1 | AF075581 | Mesembryanthemum crystallinum | SEQ ID NO. 1164 | | |
| AAD11430.1 | AF097667 | Mesembryanthemum crystallinum | BAA31510.1 | AB010878 | Nicotiana tabacum |
| CAB90634.1 | AJ277744 | Fagus sylvatica | CAA63651.1 | X93160 | Spinacia oleracea |
| CAC35951.1 | AF079355 | Mesembryanthemum crystallinum | CAA75149.1 | Y14932 | Spinacia oleracea |
| AAB93832.1 | U81960 | Zea mays | SEQ ID NO. 1167 | | |
| CAC09576.1 | AJ298988 | Fagus sylvatica | BAA90815.1 | AP001168 | Oryza sativa |
| SEQ ID NO. 1141 | | Solanum tuberosum | BAA90804.1 | AP001168 | Oryza sativa |
| CAA55860.1 | X79273 | | BAA90803.1 | AP001168 | Oryza sativa |
| SEQ ID NO. 1147 | | Hordeum vulgare | SEQ ID NO. 1168 | | |
| AAB59330.1 | M31545 | Glycine max | AAG25966.1 | AF302082 | Nicotiana tabacum |
| AAC48996.1 | U20260 | Lycopersicon esculentum | AAA33915.1 | I27821 | Oryza sativa |
| AAA81881.1 | L39279 | Nicotiana tabacum | AAB61708.1 | U93048 | Daucus carota |
| CAA46787.1 | X65974 | Nicotiana tabacum | AAD21872.1 | AF078082 | Phaseolus vulgaris |
| CAA46786.1 | X65973 | Chlamydomonas reinhardtii | BAA06538.1 | D31737 | Nicotiana tabacum |
| AAA18861.1 | U03632 | Chlamydomonas reinhardtii | AAF66615.1 | AF142596 | Nicotiana tabacum |
| AAA18862.1 | U03633 | | AAB09771.1 | U67422 | Zea mays |
| SEQ ID NO. 1153 | | Pisum sativum | BAA94516.1 | AP001800 | Oryza sativa |
| BAB39155.1 | AB048713 | Oryza sativa | AAB93834.1 | U82481 | Zea mays |
| BAA90816.1 | AP001168 | Zea mays | BAA92954.1 | AP001551 | Oryza sativa |
| AAG13663.1 | AF263457 | Zea mays | CAB41878.1 | Y18259 | Brassica oleracea |
| AAC98090.1 | AF067400 | Zea mays | AAK21965.1 | AY028699 | Brassica napus |
| AAC98091.1 | AF067401 | Oryza sativa | BAA94517.1 | AP001800 | Oryza sativa |
| BAB39156.1 | AB048714 | Pisum sativum | CAA73134.1 | Y12531 | Brassica oleracea |
| SEQ ID NO. 1154 | | Phaseolus vulgaris | AAC23542.1 | U20948 | Ipomoea trifida |
| CAA42942.1 | X60391 | Nicotiana alata | BAA78764.1 | AB023482 | Oryza sativa |
| CAA49895.1 | X70441 | Petroselinum crispum | CAA67145.1 | X98520 | Brassica oleracea |
| AAA98492.1 | L36982 | | CAB41879.1 | Y18260 | Brassica oleracea |
| SEQ ID NO. 1163 | | Oryza sativa | BAA94509.1 | AB041503 | Populus nigra |
| BAA95840.1 | AP002070 | Pisum sativum | CAA73133.1 | Y12530 | Brassica oleracea |
| CAA48297.1 | X68215 | Pisum sativum | BAA92836.1 | AB032473 | Brassica oleracea |
| CAA48300.1 | X68218 | | SEQ ID NO. 1170 | | |
| | | | AAB88875.1 | U93272 | Prunus armeniaca |

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| CAA83683.1 | Z32850 | Ricinus communis |
| AAA63452.1 | M55191 | Solanum tuberosum |
| AAC67586.1 | AF095520 | Citrus x paradisi |
| AAA63451.1 | M55190 | Solanum tuberosum |
| AAC67587.1 | AF095521 | Citrus x paradisi |
| CAA83682.1 | Z32849 | Ricinus communis |
| SEQ ID NO. | 1182 | |
| CAC20842.1 | AJ250467 | Pinus sylvestris |
| AAF59906.1 | AF197947 | Glycine max |
| AAB36558.1 | U77888 | Ipomoea nil |
| AAF91324.1 | AF244890 | Glycine max |
| AAF59905.1 | AF197946 | Glycine max |
| AAE91323.1 | AF244889 | Glycine max |
| AAE91322.1 | AF244888 | Glycine max |
| AAF34426.1 | AF172282 | Oryza sativa |
| CAAG1510.1 | X89226 | Oryza sativa |
| AAC49123.1 | U37133 | Oryza sativa |
| AAC80225.1 | U72723 | Oryza longistaminata |
| AAE82755.1 | U72725 | Oryza longistaminata |
| AAE82756.1 | U72724 | Oryza sativa |
| BAA88636.1 | AB029327 | Nicotiana tabacum |
| SEQ ID NO. | 1183 | |
| BAA83103.1 | D88820 | Acetabularia mediterranea |
| CAA58701.1 | X83730 | Nicotiana tabacum |
| BAA23649.1 | AB009077 | Vigna radiata |
| CAA54869.1 | X77915 | Nicotiana tabacum |
| BAA08232.1 | D45383 | Oryza sativa |
| AAA61609.1 | I32791 | Beta vulgaris |
| BAA33149.1 | D86306 | Cucurbita moschata |
| BAA08233.1 | D45384 | Oryza sativa |
| CAA58700.1 | X83729 | Nicotiana tabacum |
| AAF69010.1 | AF257777 | Vitis vinifera |
| BAA02717.2 | D13472 | Hordeum vulgare |
| AAC49175.1 | U31467 | Vigna radiata |
| BAA36841.1 | AB018529 | Chara corallina |
| BAB18681.1 | AB032839 | Hordeum vulgare |
| AAA61610.1 | I32792 | Beta vulgaris |
| CAA58659.1 | X83728 | Nicotiana tabacum |
| AAA80347.1 | U36437 | Zea mays |
| CAA04387.1 | AF009568 | Gossypium hirsutum |
| AAF07174.1 | AF192308 | Vitis vinifera |
| AAC06255.1 | AF053080 | Malus x domestica |
| AAA79993.1 | U36439 | Rubus hispidus |
| SEQ ID NO. | 1184 | |
| AAD21872.1 | AF078082 | Phaseolus vulgaris |
| AAC23542.1 | U20948 | Ipomoea trifida |
| CAA73134.1 | Y12531 | Brassica oleracea |
| AAB93834.1 | U82481 | Zea mays |
| CAB89179.1 | AJ245479 | Brassica napus subsp. napu |
| AAA33008.1 | M97667 | Brassica napus |
| AAA33000.1 | M76647 | Brassica oleracea |
| CAA67145.1 | X98520 | Brassica oleracea |
| CAA73133.1 | Y12530 | Brassica oleracea |
| BAA92836.1 | AB032473 | Brassica oleracea |
| CAB41878.1 | Y18259 | Brassica oleracea |
| BAA23676.1 | AB000970 | Brassica rapa |
| CAB41879.1 | Y18260 | Brassica oleracea |
| CAA79355.1 | Z18921 | Brassica oleracea |
| BAA06285.1 | D30049 | Brassica rapa |
| BAA21132.1 | D88193 | Brassica rapa |
| CAA74662.1 | Y14286 | Brassica oleracea |
| AAA62232.1 | U00443 | Brassica napus |
| BAA92837.1 | AB032474 | Brassica oleracea |
| CAA74661.1 | Y14285 | Brassica oleracea |
| BAA07577.2 | D38564 | Brassica rapa |
| BAA07576.1 | D38563 | Brassica rapa |
| BAB21001.1 | AB054061 | Brassica rapa |
| AAD52097.1 | AF088885 | Nicotiana tabacum |
| AAA33915.1 | I27821 | Oryza sativa |
| BAA92954.1 | AP001551 | Oryza sativa |
| AAK21965.1 | AY028699 | Brassica napus |
| CAB51836.1 | AJ243961 | Oryza sativa |
| AAG03090.1 | AC073405 | Oryza sativa |
| CAA79324.1 | Z18884 | Brassica oleracea |
| SEQ ID NO. | 1186 | |
| CAA06999.1 | AJ006378 | Lycopersicon esculentum |
| CAA07000.1 | AJ006379 | Lycopersicon esculentum |
| CAA76727.1 | Y17278 | Lycopersicon esculentum |

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| SEQ ID NO. | 1190 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| AAA33129.1 | M91372 | Cucumis sativus | CAA69598.1 | Y08273 | Digitalis lanata |
| AAD37376.1 | AF145350 | Glycine max | AAA57045.1 | I29469 | Oryza sativa |
| CAA40796.1 | X57564 | Armoracia rusticana | AAA62706.1 | M55018 | Brassica napus |
| AAA34050.1 | M74103 | Nicotiana sylvestris | AAA57046.1 | L29470 | Oryza sativa |
| AAC49819.1 | AF014468 | Oryza sativa | AAA63543.1 | M55019 | Lycopersicon esculentum |
| CAA71493.1 | Y10467 | Spinacia oleracea | CAA59468.1 | X85185 | Catharanthus roseus |
| BRA77388.1 | AB024438 | Scutellaria baicalensis | AAC05639.1 | AF052206 | Chlamydomonas reinhardtii |
| CAA71494.1 | Y10468 | Spinacia oleracea | AAA57044.1 | L29471 | Oryza sativa |
| AAB67737.1 | L77080 | Stylosanthes humilis | AAD22975.1 | AF126551 | Solanum tuberosum subsp. tuberosum |
| CAA62597.1 | X91172 | Raphanus sativus | CAA52414.1 | X74403 | Phaseolus vulgaris |
| AAF63024.1 | AF244921 | Spinacia oleracea | CAA76054.1 | Y16088 | Lupinus luteus |
| AAA32973.1 | M73234 | Hordeum vulgare | AAF00471.1 | AF178458 | Lupinus luteus |
| CAA64413.1 | X94943 | Lycopersicon esculentum | AAA63403.1 | M55021 | Zea mays |
| AAA33121.1 | M32742 | Cucumis sativus | CAA48638.1 | X86678 | Zea mays |
| CAA62615.1 | X91232 | Mercurialis annua | AAA64430.1 | L32095 | Vicia faba |
| BAA03911.1 | D16442 | Oryza sativa | AAB51386.1 | U92087 | Solanum commersonii |
| AAC49821.1 | AF014470 | Oryza sativa | AAF65770.1 | AF242312 | Euphorbia esula |
| BAA11853.1 | D83225 | Populus nigra | ARG01536.1 | AF291180 | Capsicum annuum |
| CAB99487.1 | AJ276227 | Hordeum vulgare | CAA10766.1 | AJ132763 | Pseudotsuga menziesii |
| AAB97853.1 | AF043234 | Striga asiatica | CAA65889.1 | X97255 | Digitalis lanata |
| AAA34108.1 | J02979 | Nicotiana tabacum | CAA78459.1 | Z14081 | Nicotiana tabacum |
| AAA65637.1 | L13654 | Lycopersicon esculentum | SEQ ID NO. 1200 | | |
| CAA59487.1 | X85230 | Triticum aestivum | CAA50575.1 | X71441 | Nicotiana tabacum |
| SEQ ID NO. 1195 | | | CAA56318.1 | X80008 | Nicotiana tabacum |
| AAD39534.2 | AF150630 | Gossypium hirsutum | CAA53366.1 | X75670 | Oryza sativa |
| AAC39333.1 | AF030052 | Oryza sativa subsp. japonica | CAA04702.1 | AJ001369 | Olea europaea |
| SEQ ID NO. 1196 | | | AAC49701.1 | U79011 | Borago officinalis |
| CAA98168.1 | Z73940 | Lotus japonicus | AAA62621.1 | L22209 | Cuscuta reflexa |
| AAA34004.1 | L14930 | Glycine max | CAA04703.1 | AJ001370 | Olea europaea |
| AAA34242.1 | L14928 | Vigna aconitifolia | AAA32990.1 | M87514 | Brassica oleracea |
| CAA98169.1 | Z73941 | Lotus japonicus | CAA48240.1 | X68140 | Nicotiana tabacum |
| AAB71504.1 | U82219 | Prunus armeniaca | AAD10774.1 | AF098510 | Petunia x hybrida |
| CAA98170.1 | Z73942 | Lotus japonicus | AAF60299.1 | AF233640 | Petunia x hybrida |
| CAA98171.1 | Z73943 | Lotus japonicus | SEQ ID NO. 1201 | | |
| CAA46600.1 | X65650 | Pisum sativum | BAA08910.1 | D50407 | Cucumis sativus |
| AAB47557.1 | U87142 | Mesembryanthemum crystallinum | AAD16897.1 | AF105221 | Glycine max |
| BAA02904.1 | D13758 | Oryza sativa | BAA25168.1 | D88383 | Hordeum vulgare |
| SEQ ID NO. 1198 | | | BAA25003.1 | AB011416 | Oryza sativa |

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| CAA60054.1 | X86101 | Hordeum vulgare | AAF04972.1 | AF091458 | Oryza sativa |
| CAA63140.1 | X92403 | Hordeum vulgare | BAA33457.1 | AB007504 | Triticum aestivum |
| BAA25167.1 | D88382 | Hordeum vulgare | AAB50187.1 | U49734 | Sorghum bicolor |
| BAA11091.1 | D67088 | Cucumis sativus | AAC49817.1 | U78892 | Oryza sativa |
| CAA60055.1 | X86102 | Hordeum vulgare | AAF19048.1 | AF058698 | Oryza sativa |
| AAG41962.1 | AF305613 | Chlamydomonas reinhardtii | AAC83170.1 | U78948 | Malus x domestica |
| AAG02480.1 | AF294753 | Hordeum vulgare | | | |
| AAG02479.1 | AF294752 | Hordeum vulgare | | | |
| SEQ ID NO. 1202 | | | | | |
| AAG09811.1 | AF275345 | Lycopersicon esculentum | SEQ ID NO. 1203 | | Brassica napus |
| AAK27150.1 | AF345246 | Ipomoea batatas | AAG28780.1 | AF306518 | Lotus japonicus |
| AAF22455.1 | AF060880 | Paulownia kawakamii | CAC10555.1 | AJ279059 | Lycopersicon esculentum |
| AAK27151.1 | AF346303 | Ipomoea batatas | CAA64475.1 | X95098 | Lycopersicon esculentum |
| AAB94005.1 | AF008651 | Solanum tuberosum | AAG11397.1 | AF118858 | Nepenthes alata |
| AAK21250.1 | AF335237 | Petunia x hybrida | AAD16012.1 | AF080541 | Brassica napus |
| BAA81880.1 | AB003322 | Oryza sativa | AAF01774.1 | AF188744 | |
| CAB97349.1 | AJ249141 | Hordeum vulgare | | | |
| CAC29335.1 | AJ293816 | Oryza sativa | SEQ ID NO. 1205 | | Limnanthes douglasii |
| AAAF66690.1 | AF144623 | Canavalia lineata | AAG28600.1 | AF247134 | Simmondsia chinensis |
| AAB94006.1 | AF008652 | Solanum tuberosum | AAC49186.1 | U37088 | Brassica napus |
| AAK21256.1 | AF335243 | Petunia x hybrida | AAB72178.1 | AF009563 | Brassica napus |
| AAC84133.1 | AF101420 | Cichorium intybus | AAAG6054.1 | U50771 | Brassica napus |
| AAG09919.1 | AF112149 | Zea mays | AAK11266.1 | AF333040 | Dunaliella salina |
| BAA25246.1 | D89671 | Ceratopteris richardii | CAC17746.1 | AJ291728 | Zea mays |
| AAG09136.1 | AF150932 | Physcomitrella patens | AAC25109.1 | AF054497 | Brassica napus |
| AAG09135.1 | AF150931 | Physcomitrella patens | AAC25110.1 | AF054498 | Brassica napus |
| AAAF77579.1 | AF072534 | Capsicum annuum | AAC25111.1 | AF054499 | Brassica rapa |
| AAK21257.1 | AF335244 | Petunia x hybrida | AAC25112.1 | AF054500 | Brassica oleracea |
| AAB71434.1 | U78890 | Oryza sativa | | | |
| BAA81865.1 | AB026295 | Oryza sativa | SEQ ID NO. 1206 | | Vitis vinifera |
| CAB56800.1 | AJ011675 | Oryza sativa | AAF06346.1 | AF195653 | Pyrus pyrifolia |
| AAAF18376.1 | AF158543 | Picea abies | BAA28872.1 | AB006009 | Malus x domestica |
| AAD10625.1 | AF035378 | Lolium temulentum | CAC10270.1 | AJ243427 | Malus x domestica |
| AJ249146 | AF035379 | Hordeum vulgare | AAAC36740.1 | AF090143 | Nicotiana tabacum |
| AAK21252.1 | AF335239 | Petunia x hybrida | BAA74546.2 | AB000834 | Castanea sativa |
| BAA81883.1 | AB003325 | Oryza sativa | CAB62167.1 | AJ242828 | Vitis vinifera |
| AAB51377.1 | U91964 | Medicago sativa | AAF06347.1 | AF195654 | Oryza sativa |
| CAA67968.1 | X99654 | Betula pendula | CAC09477.1 | AL442113 | Prunus avium |
| AAD10626.1 | AF035379 | Lolium temulentum | AAB38064.1 | U32440 | Brassica rapa |
| CAA53782.1 | X76188 | Nicotiana tabacum | AAB95118.1 | U71244 | Pseudotsuga menziesii |
| | | | CAA10492.1 | AJ131731 | Cestrum elegans |
| | | | BAA95017.1 | AB031870 | Avena sativa |
| | | | AAB02259.1 | U57787 | |

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| AAD55090.1 | AF178653 | Vitis riparia | AAAF43496.1 | AF131222 | Lophopyrum elongatum |
| BAA95165.1 | AB029918 | Nicotiana tabacum | BAA78764.1 | AB023482 | Oryza sativa |
| AAB61590.1 | AF003007 | Vitis vinifera | AAB09771.1 | U67422 | Zea mays |
| AAF82264.1 | AF227324 | Vitis vinifera | AAF66615.1 | AF142596 | Nicotiana tabacum |
| AAB53368.1 | U77657 | Oryza sativa | AAG03090.1 | AC073405 | Oryza sativa |
| CAA09228.1 | AJ010501 | Cicer arietinum | CAB51834.1 | 00069 | Oryza sativa |
| CAA33293.1 | X15224 | Nicotiana tabacum | AAG25966.1 | AF302082 | Nicotiana tabacum |
| CAA33292.1 | X15223 | Nicotiana tabacum | CAA97692.1 | Z73295 | Catharanthus roseus |
| SEQ ID NO. 1208 | | | | | |
| AAC36698.1 | AF075580 | Mesembryanthemum crystallinum | AAF91324.1 | AF244890 | Glycine max |
| AAG43835.1 | AF213455 | Zea mays | AAF91323.1 | AF244889 | Glycine max |
| CAA72341.1 | Y11607 | Medicago sativa | BAA82556.1 | AB030083 | Populus nigra |
| CAC10358.1 | AJ277086 | Nicotiana tabacum | BAA94516.1 | AP001800 | Oryza sativa |
| AAD17804.1 | AF092431 | Lotus japonicus | AAF59906.1 | AF197947 | Glycine max |
| AAD17805.1 | AF092432 | Lotus japonicus | AAF59905.1 | AF197946 | Glycine max |
| AAC36697.1 | AF075579 | Mesembryanthemum crystallinum | SEQ ID NO. 1211 | | |
| CAC10359.1 | AJ277087 | Nicotiana tabacum | AAC09420.1 | M68929 | Mitochondrion Marchantia |
| CAB90633.1 | AJ277743 | Fagus sylvatica | polymorpha | | |
| AAC36700.1 | AF075582 | Mesembryanthemum crystallinum | CAA33994.1 | X15901 | Plastid Oryza sativa |
| CAC09575.1 | AJ298987 | Fagus sylvatica | SEQ ID NO. 1212 | | |
| CAB90634.1 | AJ277744 | Fagus sylvatica | CAA43941.1 | X61937 | Brassica napus |
| AAC26828.1 | AF075603 | Oryza sativa | CAA41064.1 | X58000 | Brassica napus |
| AAB93832.1 | U81960 | Zea mays | AAB22218.2 | S37032 | Brassica napus |
| AAC35951.1 | AF079355 | Mesembryanthemum crystallinum | CAA45313.1 | X63779 | Brassica napus |
| AAD11430.1 | AF097667 | Mesembryanthemum crystallinum | CAA55008.1 | X78118 | Prunus dulcis |
| AAC36699.1 | AF075581 | Mesembryanthemum crystallinum | CAA88360.1 | Z48450 | Citrus sinensis |
| CAC09576.1 | AJ298988 | Fagus sylvatica | AAD42942.1 | AF091840 | Sesamum indicum |
| SEQ ID NO. 1210 | | | | | |
| AAC27894.1 | AF023164 | Zea mays | AAB67992.1 | U72411 | Bromus secalinus |
| AAC27895.1 | AF023165 | Zea mays | AAA68065.1 | U13701 | Zea mays |
| AAK21965.1 | AY028699 | Brassica napus | AAC02239.1 | U43930 | Oryza sativa |
| AAC61805.1 | U28007 | Lycopersicon esculentum | CAA57995.1 | X82678 | Hordeum vulgare |
| AAF91336.1 | AF249317 | Glycine max | AAC33281.1 | AF022148 | Oryza sativa |
| AAF91337.1 | AF249318 | Glycine max | AAD41080.1 | AF147758 | Elaeis guineensis |
| BAA82394.1 | AF000367 | Oryza sativa | AAG43516.1 | AF210696 | Perilla frutescens |
| AAG16628.1 | AY007545 | Brassica napus | AAB58402.1 | U97700 | Sesamum indicum |
| BAA94510.1 | AB041504 | Populus nigra | AAG43517.1 | AF210697 | Perilla frutescens |
| BAA94509.1 | AB041503 | Populus nigra | AAG09751.1 | AF237625 | Perilla frutescens |
| AAK11674.1 | AF339747 | Lophopyrum elongatum | AAA17854.1 | U09118 | Glycine max |
| | | | AAG24455.1 | AF311746 | Perilla frutescens |
| | | | AAA17855.1 | U09119 | Glycine max |

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| CAA43183.1 | X60773 | Glycine max |
| AAB41524.1 | M91079 | Medicago sativa |
| AAK13449.1 | AF325917 | Arachis hypogaea |
| CAA34490.1 | X16470 | Phaseolus vulgaris |
| AAG23840.1 | AF302807 | Sesamum indicum |
| AAH41480.1 | M91080 | Medicago sativa |
| CAA44224.1 | X62352 | Helianthus annuus |
| AAJ04902 | | Glycine max |
| AAK13450.1 | AF325918 | Arachis hypogaea |
| AAA50174.1 | U03433 | Pisum sativum |
| CAA57994.1 | X82677 | Hordeum vulgare |
| BAA76416.1 | AB024988 | Cicer arietinum |
| AAG01171.1 | AF288622 | Fagopyrum esculentum |
| CAA57544.1 | X82019 | Brassica napus |
| CAA43182.1 | X60772 | Glycine max |
| CAA57545.1 | X82020 | Brassica napus |
| AAA67699.1 | J05212 | Zea mays |
| AAB01098.1 | U47099 | Daucus carota |
| AAD10240.1 | AF019212 | Oryza sativa subsp. indica |
| AAC02240.1 | U43931 | Oryza sativa |
| CAA55348.1 | X78679 | Helianthus annuus |
| AAA68066.1 | U13702 | Zea mays |
| CAA64801.1 | X95555 | Brassica napus |
| AAD24547.1 | AF117126 | Brassica oleracea |
| CAA64800.1 | X95554 | Brassica napus |
| CAA64805.1 | X95559 | Brassica napus |
| CAA70173.1 | X09986 | Brassica napus |
| SEQ ID NO. | 1215 | |
| AAF06347.1 | AF195654 | Vitis vinifera |
| AAF06346.1 | AF195653 | Vitis vinifera |
| BAA28872.1 | AB006009 | Pyrus pyrifolia |
| BAA74546.2 | AB000834 | Nicotiana tabacum |
| CAC10270.1 | AJ243427 | Malus x domestica |
| AAC36740.1 | AF090143 | Malus x domestica |
| CAC09477.1 | AL442113 | Oryza sativa |
| AAB38064.1 | U32440 | Prunus avium |
| AAB95118.1 | U71244 | Brassica rapa |
| CABG2167.1 | AJ242828 | Castanea sativa |
| BAA95017.1 | AB031870 | Cestrum elegans |
| CAA10492.1 | AJ131731 | Pseudotsuga menziesii |
| BAA95165.1 | AB029918 | Nicotiana tabacum |
| AAB02259.1 | U57787 | Avena sativa |
| AAB53368.1 | U77657 | Oryza sativa |
| AAD55090.1 | AF178653 | Vitis riparia |
| CAA09228.1 | AJ010501 | Cicer arietinum |
| CAA33293.1 | X15224 | Nicotiana tabacum |
| CAA33292.1 | X15223 | Nicotiana tabacum |
| AAB61590.1 | AF003007 | Vitis vinifera |
| AAF82264.1 | AF227324 | Vitis vinifera |
| AAA93095.1 | J01209 | Thaumatooccus daniellii |
| SEQ ID NO. | 1216 | |
| BAB41137.1 | AB060130 | Zea mays |
| BAB20581.1 | AB042268 | Zea mays |
| BAB17300.1 | AB042260 | Zea mays |
| BAB20580.1 | AB042267 | Zea mays |
| BAB20582.1 | AB042269 | Zea mays |
| BAA82873.1 | AB024291 | Zea mays |
| CAB94968.1 | AJ287322 | Arabidopsis lyrata |
| AAB87071.1 | AF031921 | Raphanus sativus |
| CAA53577.1 | X75963 | Vitis vinifera |
| BAA36552.1 | AB011794 | Citrus sinensis |
| AAC16013.1 | AF061808 | Elaeagnus umbellata |
| CAA32729.1 | X14589 | Petunia x hybrida |
| CAA68769.1 | Y00852 | Petunia x hybrida |
| CAA91921.1 | Z67980 | Callistephus chinensis |
| AAF60296.1 | AF233637 | Petunia x hybrida |
| CAA91931.1 | Z67989 | Dianthus caryophyllus |
| AAB86474.1 | AF028238 | Ipomoea purpurea |
| CAA32730.1 | X14590 | Petunia x hybrida |
| BAA90334.1 | AB037396 | Ipomoea batatas |
| CAA80441.1 | Z22760 | Zea mays |
| CAA48774.1 | X68978 | Malus sp. |
| CAA48775.1 | X68979 | Malus sp. |
| BAA09795.1 | D63577 | Pueraria montana var. lobata |
| CAA78763.1 | Z15046 | Phaseolus vulgaris |

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| BAB20579.1 | AB042261 | Zea mays | AAB61708.1 | U93048 | Daucus carota |
| BAA85113.1 | AB031012 | Zea mays | AAF66615.1 | AF142596 | Nicotiana tabacum |
| AAK14395.1 | AF339732 | Dianthus caryophyllus | AAB82756.1 | U72724 | Oryza sativa |
| BAA85112.1 | AB031011 | Zea mays | AAK21965.1 | AY028699 | Brassica napus |
| BAA75253.1 | AB004882 | Zea mays | AAC27894.1 | AF023164 | Zea mays |
| AAD55941.1 | AF174532 | Chlamydomonas reinhardtii | SEQ ID NO. 1222 | | |
| AAD55945.1 | AF174480 | Chlamydomonas reinhardtii | CRA03982.1 | AJ000265 | Spinacia oleracea |
| AAF32350.1 | AF219972 | Mesembryanthemum crystallinum | BAB17656.1 | AB044969 | Arabidopsis lyrata subsp. petraea |
| SEQ ID NO. 1219 | | | | | |
| BAA78738.1 | AB023482 | Oryza sativa | BAB17655.1 | AB044968 | Arabidopsis gemmifera |
| CAB96899.1 | AJ251249 | Catharanthus roseus | BAA08148.1 | D45217 | Oryza sativa |
| CAB96900.1 | AJ251250 | Catharanthus roseus | BAA08149.1 | D45218 | Oryza sativa |
| AAF76898.1 | AF274033 | Atriplex hortensis | AAC08411.1 | AF054455 | Leavenworthia crassa |
| CAC12822.1 | AJ299252 | Nicotiana tabacum | CAA03983.1 | AJ000266 | Spinacia oleracea |
| AAC24587.1 | AF071893 | Prunus armeniaca | BAA23184.1 | D88929 | Dioscorea tokoro |
| BAB03248.1 | AB037183 | Oryza sativa | BAA23183.1 | D88928 | Dioscorea tokoro |
| BAB16083.1 | AB036883 | Oryza sativa | BAA23181.1 | D88926 | Dioscorea tokoro |
| AAG43545.1 | AF211527 | Nicotiana tabacum | BAA23179.1 | D88924 | Dioscorea tokoro |
| AAG43548.1 | AF211530 | Nicotiana tabacum | BAA23178.1 | D88923 | Dioscorea tokoro |
| AAG43549.1 | AF211531 | Nicotiana tabacum | BAA23177.1 | D88922 | Dioscorea tokoro |
| AAF23899.1 | AF193803 | Oryza sativa | BAA23176.1 | D88921 | Dioscorea tokoro |
| AAF63205.1 | AF245119 | Mesembryanthemum crystallinum | BAA23182.1 | D88927 | Dioscorea tokoro |
| BAA07321.1 | D38123 | Nicotiana tabacum | BAA23185.1 | D88930 | Dioscorea tokoro |
| AAC62619.1 | AF057373 | Nicotiana tabacum | BAA23180.1 | D88925 | Dioscorea tokoro |
| BAA99376.1 | AF002526 | Oryza sativa | CAA61575.1 | X89395 | Clarkia arcuata |
| AAK01089.1 | AF298231 | Hordeum vulgare | AAA82734.1 | U17225 | Zea mays |
| SEQ ID NO. 1220 | | | CAA61564.1 | X89384 | Clarkia lewisii |
| CAC20842.1 | AJ250467 | Pinus sylvestris | CAA50402.1 | X71084 | Clarkia lewisii |
| AAB36558.1 | U77888 | Ipomoea nil | CAA61566.1 | X89386 | Clarkia xantiana |
| AAF91324.1 | AF244890 | Glycine max | CAA56693.1 | X80666 | Clarkia xantiana |
| AAF91322.1 | AF244888 | Glycine max | CAA61574.1 | X89394 | Clarkia williamsonii |
| AAC36318.1 | AF053127 | Malus x domestica | CAA61569.1 | X89389 | Clarkia mildrediae |
| BAA84787.1 | AP000559 | Oryza sativa | CAB55566.1 | Y14129 | Clarkia gracilis |
| BAA83373.1 | AP000391 | Oryza sativa | CAA61576.1 | X89396 | Clarkia franciscana |
| AAF59905.1 | AF197946 | Glycine max | CAA61567.1 | X89387 | Clarkia xantiana |
| AAF91323.1 | AF244889 | Glycine max | CAA56694.1 | X80667 | Clarkia xantiana |
| AAF34426.1 | AF172282 | Oryza sativa | CAA61570.1 | X89390 | Clarkia concinna |
| CAA61510.1 | X89226 | Oryza sativa | CAA61572.1 | X89392 | Clarkia rostrata |
| AAB82755.1 | U72725 | Oryza longistaminata | CAA61577.1 | X89397 | Oenothera mexicana |
| | | | CAB55567.1 | Y14130 | Clarkia gracilis |

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| CAA61565.1 | X89385 | Clarkia lewisii | AAC32140.1 | AF051239 | Picea mariana |
| CAA45616.1 | X64332 | Clarkia lewisii | AAA34308.1 | M55604 | Triticum aestivum |
| CAA61571.1 | X89391 | Clarkia concinna | AAA34265.1 | M90663 | Triticum aestivum |
| BAA23205.1 | AB006088 | Dioscorea quinqueloba | AAA34266.1 | M90664 | Triticum aestivum |
| BAA22035.1 | AB006617 | Dioscorea nipponica | CAA71762.1 | Y10804 | Nicotiana tabacum |
| BAA22037.1 | AB006619 | Dioscorea septemloba | | | |
| BAA22038.1 | AB006620 | Dioscorea tenuipes | SEQ ID NO. 1229 | | |
| BAA23175.1 | D89920 | Dioscorea tenuipes | CAA55693.1 | X79086 | Zea mays |
| BAA22033.1 | AB006615 | Dioscorea gracillima | CAA55691.1 | X79085 | Zea mays |
| BAA22036.1 | AB006618 | Dioscorea quinqueloba | AAF97508.1 | AF2422298 | Oryza sativa |
| BAA22034.1 | AB006616 | Dioscorea gracillima | | | |
| CAA50403.1 | X71085 | Clarkia lewisii | SEQ ID NO. 1234 | | |
| AAK07826.1 | AF293478 | Leavenworthia stylosa | AAA50763.1 | U15605 | Nicotiana glutinosa |
| AAK07825.1 | AF293477 | Leavenworthia stylosa | CAA08798.1 | AJ009720 | Solanum tuberosum |
| AAK07822.1 | AF293474 | Leavenworthia stylosa | AAG09951.1 | AF175388 | Glycine max |
| AAK07821.1 | AF293473 | Leavenworthia stylosa | AAG43546.1 | AF211528 | Nicotiana tabacum |
| AAK07820.1 | AF293472 | Leavenworthia stylosa | CAC35326.1 | AJ310151 | Linum usitatissimum |
| | | | CAC35339.1 | AJ310164 | Linum usitatissimum |
| SEQ ID NO. 1224 | | | CAC35321.1 | AJ310150 | Linum usitatissimum |
| BAB03347.1 | AP002817 | Oryza sativa | CAC35329.1 | AJ310154 | Linum usitatissimum |
| BAA92400.1 | AP001366 | Oryza sativa | CAC35338.1 | AJ310163 | Linum usitatissimum |
| CAA63102.2 | X92205 | Petunia x hybrida | CAA08797.1 | AJ009719 | Solanum tuberosum |
| CAA63101.1 | X92204 | Petunia x hybrida | CAC35330.1 | AJ310155 | Linum usitatissimum |
| BAA84803.1 | AP000559 | Oryza sativa | CAC35337.1 | AJ310162 | Linum usitatissimum |
| | | | CAC35334.1 | AJ310159 | Linum usitatissimum |
| SEQ ID NO. 1226 | | | AAK28810.1 | AF310964 | Linum usitatissimum |
| AAD43046.1 | AF124045 | Sorghum bicolor | AAK28806.1 | AF310960 | Linum usitatissimum |
| | | | CAC35333.1 | AJ310158 | Linum usitatissimum |
| SEQ ID NO. 1227 | | | CAC35325.1 | AJ310150 | Linum usitatissimum |
| AAC49832.1 | AF005492 | Oryza sativa | CAC35328.1 | AJ310153 | Linum usitatissimum |
| AAC04862.1 | AF046934 | Paulownia kawakamii | CAC35336.1 | AJ310161 | Linum usitatissimum |
| BAA97100.1 | AB040471 | Nicotiana tabacum | AAK28803.1 | AF310958 | Linum usitatissimum |
| CAA05898.1 | AJ003142 | Lycopersicon esculentum | CAC35327.1 | AJ310152 | Linum usitatissimum |
| CAA52015.1 | X73635 | Lycopersicon esculentum | CAC35332.1 | AJ310157 | Linum usitatissimum |
| BAA96162.1 | AP002092 | Oryza sativa | AAK28811.1 | AF310966 | Linum usitatissimum |
| CAA71687.1 | Y10685 | Glycine max | AAK28812.1 | AF310968 | Linum usitatissimum |
| CAA41453.1 | X58577 | Petroselinum crispum | CAC35331.1 | AF310156 | Linum usitatissimum |
| CAA70216.1 | Y09013 | Triticum aestivum | CAC35323.1 | AJ310150 | Linum usitatissimum |
| | | | AAK28805.1 | AF310960 | Linum usitatissimum |
| SEQ ID NO. 1228 | | | AAK28808.1 | AF310961 | Linum usitatissimum |
| CAA09619.1 | AJ011418 | Lycopersicon esculentum | AAB47618.1 | U73916 | Linum usitatissimum |

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| AAC32111.1 | AF051206 | Picea mariana | AAC37345.1 | I20621 | Zea mays |
| BAB20886.1 | AB053294 | Oryza sativa | AAC35341.1 | AF072448 | Ipomoea trifida |
| CAR55399.1 | X78822 | Chlamydomonas reinhardtii | AAC35343.1 | AF072450 | Ipomoea trifida |
| CAA94534.1 | Z70677 | Ricinus communis | AAB57737.1 | U89270 | Tripsacum dactyloides |
| CAR56850.1 | X80887 | Chlamydomonas reinhardtii | AAF89645.1 | AF169018 | Glycine max |
| CAA05081.1 | AJ001903 | Triticum turgidum subsp. durum | AAF04253.1 | AF097651 | Pisum sativum |
| AAC49358.1 | U35831 | Pisum sativum | AAF04193.1 | AF053638 | Pisum sativum |
| CAR53900.1 | X76269 | Pisum sativum | AAB57738.1 | U89271 | Tripsacum dactyloides |
| BAA13524.1 | D87984 | Fagopyrum esculentum | AAF04194.1 | AF053639 | Pisum sativum |
| CAA41415.1 | X58527 | Nicotiana tabacum | AAB00109.1 | U21801 | Lycopersicon esculentum |
| AAD49233.1 | AF159388 | Phalaris coerulescens | SEQ ID NO. 1259 | | |
| BAB39913.1 | AF002912 | Oryza sativa | AAC78466.1 | AF053311 | Zantedeschia aethiopica |
| AAD49230.1 | AF159385 | Hordeum bulbosum | CAA04142.1 | AJ000508 | Pisum sativum |
| AAD49234.1 | AF159389 | Phalaris coerulescens | CAB59895.1 | AJ238745 | Hordeum vulgare |
| AAD49232.1 | AF159387 | Lolium perenne | CAB59893.1 | AJ238697 | Hordeum vulgare |
| CAR35826.1 | X51462 | Spinacia oleracea | CAB96145.1 | AJ250951 | Mesembryanthemum crystallinum |
| CAR35827.1 | X51463 | Spinacia oleracea | BAA22194.1 | D63425 | Spinacia oleracea |
| CAA77847.1 | Z11803 | Nicotiana tabacum | CAA42780.1 | X60219 | Nicotiana sylvestris |
| AAD56954.1 | AF186240 | Secale cereale | BAB16430.1 | AB041518 | Nicotiana tabacum |
| AAD49231.1 | AF159386 | Secale cereale | CAA75009.1 | Y14707 | Helianthus annuus |
| AAD33596.1 | AF133127 | Hevea brasiliensis | CAA75054.1 | Y14762 | Lycopersicon esculentum |
| CAA55398.1 | X78821 | Chlamydomonas reinhardtii | AAB94892.1 | AF037051 | Gossypium hirsutum |
| CAR56851.1 | X80888 | Chlamydomonas reinhardtii | CAB59894.1 | AJ238744 | Hordeum vulgare |
| CAA44209.1 | X62335 | Chlamydomonas reinhardtii | CAA74775.1 | Y14429 | Helianthus annuus |
| CAA06736.1 | AJ005841 | Oryza sativa | AAB66330.1 | AF014927 | Chlamydomonas reinhardtii |
| CAA06735.1 | AJ005840 | Triticum aestivum | BAA83594.1 | AB009083 | Chlamydomonas sp. W80 |
| AAB53695.1 | U59380 | Brassica napus | CAA75055.1 | Y14763 | Lycopersicon esculentum |
| AAD45358.1 | AF160870 | Brassica napus | CAA09194.1 | AJ010455 | Triticum aestivum |
| AAB52409.1 | U76831 | Brassica napus | CAB66331.1 | AJ279689 | Betula pendula |
| CAA33082.1 | X14959 | Spinacia oleracea | SEQ ID NO. 1261 | | |
| AAC19392.1 | AF069314 | Mesembryanthemum crystallinum | AAB18669.1 | U11716 | Pisum sativum |
| CAA45098.1 | X63537 | Pisum sativum | AAD25355.1 | AF115574 | Pisum sativum |
| AAC49357.1 | U35830 | Pisum sativum | AAA33662.1 | M18250 | Pisum sativum |
| AAC04671.1 | AF018174 | Brassica napus | SEQ ID NO. 1264 | | |
| SEQ ID NO. 1255 | | | AAB40396.1 | U80071 | Mesembryanthemum crystallinum |
| CAA52213.1 | X74115 | Picea abies | BAA0331.1 | D14044 | Cucurbita sp. |
| AAC35342.1 | AF072449 | Ipomoea trifida | AAA34030.1 | J03492 | Spinacia oleracea |
| AAC35340.1 | AF072447 | Ipomoea trifida | AAB82143.1 | AF022740 | Oryza sativa |
| CAA11153.1 | AJ223177 | Nicotiana tabacum | | | |
| CAA11154.1 | AJ223178 | Nicotiana tabacum | | | |

| CAA63482.1 | X92888 | Lycopersicon esculentum | AAF91324.1 | AF244890 | Glycine max |
|-----------------|----------|-------------------------------|-----------------|----------|-------------------------------|
| AAC32392.1 | AF082874 | Medicago sativa | AAF91323.1 | AF244889 | Glycine max |
| AAC333509.1 | U62485 | Nicotiana tabacum | AAB47424.1 | U59317 | Lycopersicon pimpinellifol |
| AAF033097.1 | AF162196 | Lactuca sativa | AAF76307.1 | AF220602 | Lycopersicon pimpinellifol |
| SEQ ID NO. 1268 | | | BAA94510.1 | AB041504 | Populus nigra |
| AAC78593.1 | AF053995 | Lycopersicon esculentum | BAA94509.1 | AB041503 | Populus nigra |
| AAC78591.1 | AF053993 | Lycopersicon esculentum | AAG16628.1 | AY007545 | Brassica napus |
| AAC78596.1 | AF053998 | Lycopersicon esculentum | AAF76314.1 | AF220603 | Lycopersicon esculentum |
| AAC78592.1 | AF053994 | Lycopersicon esculentum | AAK11568.1 | AF318492 | Lycopersicon hirsutum |
| AAD50430.1 | AF166121 | Hordeum vulgare | AAF59905.1 | AF197946 | Glycine max |
| AAC78595.1 | AF053997 | Lycopersicon esculentum | BAA78764.1 | AB023482 | Oryza sativa |
| BAB08215.1 | AF002539 | Oryza sativa | AAB47422.1 | U59318 | Lycopersicon esculentum |
| BAA96776.1 | AF002521 | Oryza sativa | SEQ ID NO. 1270 | | |
| AAC78594.1 | AF053996 | Lycopersicon pimpinellifolium | AAG00510.1 | AF285172 | Phaseolus vulgaris |
| CAA05276.1 | AJ002236 | Lycopersicon pimpinellifolium | CAB51834.1 | 00069 | Oryza sativa |
| CAA05279.1 | AJ002237 | Lycopersicon esculentum | CAA97692.1 | Z73295 | Catharanthus roseus |
| CAB55409.1 | AL117265 | Oryza sativa | AAK21965.1 | AY028699 | Brassica napus |
| CAA05274.1 | AJ002236 | Lycopersicon pimpinellifolium | AAF59905.1 | AF197946 | Glycine max |
| AAA65235.1 | U15936 | Lycopersicon pimpinellifolium | AAF59906.1 | AF197947 | Glycine max |
| CAA05268.1 | AJ002235 | Lycopersicon hirsutum | AAF91324.1 | AF244890 | Glycine max |
| AAC80225.1 | U72723 | Oryza longistaminata | AAF91322.1 | AF244888 | Glycine max |
| AAC49123.1 | U37133 | Oryza sativa | AAF91323.1 | AF244889 | Glycine max |
| SEQ ID NO. 1269 | | | BAA78764.1 | AB023482 | Oryza sativa |
| AAG00510.1 | AF285172 | Phaseolus vulgaris | AAK11567.1 | AF318491 | Lycopersicon hirsutum |
| AAK21965.1 | AY028699 | Brassica napus | BAA84787.1 | AP000559 | Oryza sativa |
| CAA97692.1 | Z73295 | Catharanthus roseus | BAA83373.1 | AP000391 | Oryza sativa |
| CAB51834.1 | 00069 | Oryza sativa | AAF76313.1 | AF220603 | Lycopersicon esculentum |
| AAK11567.1 | AF318491 | Lycopersicon hirsutum | AAB47421.1 | U59316 | Lycopersicon esculentum |
| AAF76313.1 | AF220603 | Lycopersicon esculentum | AAC36318.1 | AF053127 | Malus x domestica |
| AAB47421.1 | U59316 | Lycopersicon esculentum | BAA94509.1 | AB041503 | Populus nigra |
| AAK11566.1 | AF318490 | Lycopersicon hirsutum | AAF76306.1 | AF220602 | Lycopersicon pimpinellifolium |
| AAB47423.1 | U59315 | Lycopersicon pimpinellifolium | AAG16628.1 | AY007545 | Brassica napus |
| AAG03090.1 | AC073405 | Oryza sativa | AAB47423.1 | U59315 | Lycopersicon pimpinellifolium |
| AAF76306.1 | AF220602 | Lycopersicon pimpinellifolium | AAC48914.1 | U02271 | Lycopersicon pimpinellifolium |
| AAC48914.1 | U02271 | Lycopersicon pimpinellifolium | AAK11566.1 | AF318490 | Lycopersicon pimpinellifolium |
| AAB09771.1 | U67422 | Zea mays | BAA94510.1 | AB041504 | Lycopersicon hirsutum |
| AAK11569.1 | AF318493 | Lycopersicon hirsutum | APG03090.1 | AC073405 | Populus nigra |
| AAF59906.1 | AF197947 | Glycine max | AAB47424.1 | U59317 | Oryza sativa |
| CAA61510.1 | X89226 | Oryza sativa | AAK11569.1 | AF318493 | Lycopersicon pimpinellifolium |
| | | | AAF76307.1 | AF220602 | Lycopersicon pimpinellifolium |

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| AAF43496.1 | AF131222 | Lophopyrum elongatum | AAA17409.1 | U02607 | Solanum tuberosum |
| AAK11674.1 | AF339747 | Lophopyrum elongatum | BAB13369.1 | AB048531 | Psophocarpus tetragonolobus |
| AAF76314.1 | AF220603 | Lycopersicon esculentum | CAA30142.1 | X07130 | Solanum tuberosum |
| AAK11568.1 | AF318492 | Lycopersicon hirsutum | AAB67842.1 | U60197 | Gossypium hirsutum |
| | | | CAB01591.1 | Z78202 | Persea americana |
| SEQ ID NO. 1271 | | | CAA45821.1 | X64518 | Nicotiana tabacum |
| BAA82826.1 | AB023464 | Arabis gemmifera | CAA33517.1 | X15494 | Solanum tuberosum |
| AAF69793.1 | AF135153 | Arabis parishii | AAB41324.1 | U03591 | Medicago sativa |
| AAF69785.1 | AF135145 | Arabis lignifera | AAB41325.1 | U83592 | Medicago sativa |
| AAF69775.1 | AF135135 | Arabis drummondii | AAA33756.1 | M13968 | Phaseolus vulgaris |
| AAF69777.1 | AF135137 | Arabis fecunda | CAA71402.1 | Y10373 | Medicago truncatula |
| AAF69783.1 | AF135143 | Arabis lemmonii | AA75196.1 | L37876 | Pisum sativum |
| AAF69772.1 | AF135132 | Arabis gunnisoniana | AAB23263.1 | S43926 | Phaseolus vulgaris |
| AAF69780.1 | AF135140 | Arabis glabra | AAG23965.1 | AF307511 | Vigna sesquipedalis |
| AAF69778.1 | AF135138 | Arabis glabra | CAA61278.1 | X88800 | Vigna unguiculata |
| AAF69784.1 | AF135144 | Arabis lemmonii | AAA80656.1 | U30324 | Theobroma cacao |
| AAF69792.1 | AF135152 | Arabis parishii | | | |
| AAA32986.1 | M95835 | Brassica napus | SEQ ID NO. 1272 | | |
| AAF69786.1 | AF135146 | Arabis lignifera | CAB57457.2 | AJ249786 | Nicotiana tabacum |
| AAF69788.1 | AF135148 | Arabis lyallii | AAB57668.1 | U82974 | Citrus sinensis |
| AAF69781.1 | AF135141 | Arabis gunnisoniana | | | |
| AAF69770.1 | AF135130 | Arabis holboellii | SEQ ID NO. 1273 | | |
| AAF69773.1 | AF135133 | Arabis blepharophylla | CAA40796.1 | X57564 | Armoracia rusticana |
| AAF69789.1 | AF135149 | Arabis microphylla | BAA08499.1 | D49551 | Oryza sativa |
| AAF69776.1 | AF135136 | Arabis fecunda | CAA66037.1 | X97351 | Populus balsamifera subsp. |
| AAF69791.1 | AF135151 | Arabis microphylla | trichocarpa | | |
| AAF69787.1 | AF135147 | Arabis lignifera | BAA84764.1 | D84400 | Oryza sativa |
| AAF69790.1 | AF135150 | Arabis microphylla | CAB94692.1 | AJ242742 | Ipomoea batatas |
| AAF69782.1 | AF135142 | Halimolobos perplexa var. perplexa | BAA06335.1 | D30653 | Populus kitakamiensis |
| AAF69774.1 | AF135134 | Arabis blepharophylla | BAA11853.1 | D83225 | Populus nigra |
| CAA45822.1 | X64519 | Nicotiana tabacum | AAD37427.1 | AF149277 | Phaseolus vulgaris |
| CAA35945.1 | X51599 | Nicotiana tabacum | AAD37430.1 | AF149280 | Phaseolus vulgaris |
| CAC17793.1 | AJ301671 | Nicotiana sylvestris | BAA11852.1 | D83224 | Populus nigra |
| CAA34813.1 | X16939 | Nicotiana tabacum | CAA66035.1 | X97349 | Populus balsamifera subsp. |
| CAA34812.1 | X16938 | Nicotiana tabacum | trichocarpa | | |
| AAB23374.1 | S44869 | Nicotiana tabacum | CAA66034.1 | X97348 | Populus balsamifera subsp. |
| AAA34070.1 | M15173 | Nicotiana tabacum | trichocarpa | | |
| AAA18332.1 | U02605 | Solanum tuberosum | BAA07241.1 | D38051 | Populus kitakamiensis |
| CAA78845.1 | Z15140 | Lycopersicon esculentum | BAA92500.1 | AP001383 | Oryza sativa |
| AAA17408.1 | U02606 | Solanum tuberosum | CAA50597.1 | X71593 | Lycopersicon esculentum |
| | | | CAB67121.1 | Y19023 | Lycopersicon esculentum |

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| CAA66036.1 | X97350 | Populus balsamifera subsp. | AAA32657.1 | M36100 | Medicago sativa |
| trichocarpa | | | AAC49883.1 | U76030 | Oryza sativa |
| AAB47602.1 | L07554 | Linum usitatissimum | CAA31750.1 | X13375 | Medicago sativa |
| CAA62226.1 | X90693 | Medicago sativa | BAA31157.1 | AB015721 | Pisum sativum |
| AAA34108.1 | J02979 | Nicotiana tabacum | AAB48005.1 | M91077 | Medicago sativa |
| CAA62227.1 | X90694 | Medicago sativa | AAA03002.1 | M23312 | Sesbania rostrata |
| BAA06334.1 | D30652 | Populus kitakamiensis | BAA31156.1 | AB015720 | Pisum sativum |
| BAA01992.1 | D11396 | Nicotiana tabacum | AAK07676.1 | AY026343 | Lycopersicon esculentum |
| AAD43561.1 | AF155124 | Gossypium hirsutum | AAC04853.1 | U50083 | Lupinus luteus |
| BAA82306.1 | AB027752 | Nicotiana tabacum | CAA37898.1 | X53950 | Casuarina glauca |
| AAC98519.1 | AF007211 | Glycine max | AAB70097.1 | U94968 | Hordeum vulgare |
| BAA14143.1 | D90115 | Armoracia rusticana | CAA68462.1 | Y00401 | Lupinus luteus |
| AAB97734.1 | AF014502 | Glycine max | AAA97887.1 | U47143 | Glycine max |
| AAF63027.1 | AF244924 | Spinacia oleracea | AAF44664.1 | AF236080 | Zea mays |
| CAA62225.1 | X90692 | Medicago sativa | AAC49881.1 | U76028 | Oryza sativa |
| BAA01877.1 | D11102 | Populus kitakamiensis | AAC49884.1 | U76031 | Oryza sativa |
| AAF63026.1 | AF244923 | Spinacia oleracea | AAG01183.1 | AF291052 | Zea mays subsp. parviglumis |
| BAA14144.1 | D90116 | Armoracia rusticana | AAB86653.1 | U27194 | Parasponia andersonii |
| AAB41810.1 | L36156 | Medicago sativa | CAA68405.1 | Y00296 | Trema tomentosa |
| AAA34050.1 | M74103 | Nicotiana sylvestris | AAA03005.1 | M23313 | Sesbania rostrata |
| CAA62597.1 | X91172 | Raphanus sativus | AAG01375.1 | AY005818 | Zea mays subsp. mays |
| AAB02554.1 | L37790 | Stylosanthes humilis | CAA40900.1 | X57733 | Medicago truncatula |
| CAA76680.1 | Y17192 | Cucurbita pepo | CAA38024.1 | X54089 | Medicago sativa |
| CAA71492.1 | Y10466 | Spinacia oleracea | AAG29748.1 | AF172172 | Medicago sativa |
| BAA94962.1 | AB042103 | Asparagus officinalis | AAC28426.1 | AF027215 | Trema orientalis |
| BAA77389.1 | AB024439 | Scutellaria baicalensis | BAA24088.1 | AB009844 | Pisum sativum |
| AAD37428.1 | AF149278 | Phaseolus vulgaris | CAA90869.1 | Z54158 | Vicia faba |
| AAB41811.1 | L36157 | Medicago sativa | CAB63706.1 | AJ131349 | Trema virgata |
| AAB06183.1 | M37636 | Arachis hypogaea | CAA90870.1 | Z54159 | Trema virgata |
| | | | CAB63707.1 | AJ131350 | Vicia faba |
| | | | CAB63708.1 | AJ131351 | Trema virgata |
| | | | CAA40899.1 | X57732 | Medicago truncatula |
| SEQ ID NO. 1274 | | Cichorium intybus x Cichorium | SEQ ID NO. 1275 | | |
| CAA07547.1 | AJ007507 | | CAC07206.1 | AJ278966 | Brassica napus |
| endivia | | | AAD01600.1 | AF016713 | Lycopersicon esculentum |
| AAA33018.1 | L28826 | Casuarina glauca | AAC32034.1 | AF023472 | Hordeum vulgare |
| AAA18503.1 | U09671 | Canavalia lineata | AAF20002.1 | AF213936 | Prunus dulcis |
| CAA32044.1 | X13815 | Sesbania rostrata | AAF07875.1 | AF140606 | Oryza sativa |
| CAA31859.1 | X13505 | Sesbania rostrata | BAB19757.1 | AB052785 | Glycine max |
| CAA32043.1 | X13814 | Sesbania rostrata | | | |
| AAC49882.1 | U76029 | Oryza sativa | | | |
| CAA32492.1 | X14311 | Medicago sativa | | | |
| BAA31155.1 | AB015719 | Pisum sativum | | | |

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| BAB19756.1 | AB052784 | Glycine max | CAA64442.1 | X94986 | Manihot esculenta |
| BAB19760.1 | AB052788 | Glycine max | AAB22162.1 | S35175 | Manihot esculenta |
| AAB69642.1 | AF000392 | Lotus japonicus | AAA91166.1 | U39228 | Prunus avium |
| CAA93316.1 | 269370 | Cucumis sativus | AAF34650.1 | AF221526 | Prunus serotina |
| AAD16016.1 | AF080545 | Nepenthes alata | AAF03675.1 | AF149311 | Rauvolfia serpentina |
| AAD42860.1 | AF154930 | Prunus dulcis | CAA57913.1 | X82577 | Brassica napus |
| SEQ ID NO. 1276 | | | BAA78708.1 | AB003089 | Polygonum tinctorium |
| BAA25753.1 | AB012932 | Vigna radiata | BAA11831.1 | D83177 | Costus speciosus |
| AAF91350.1 | AF256229 | Zea mays | AAG25897.1 | AF170087 | Cucurbita pepo |
| BAA75232.1 | AB018526 | Ipomoea nil | AAF04007.1 | AF163097 | Dalbergia cochinchinensis |
| SEQ ID NO. 1278 | | | AAC69619.1 | AF072736 | Pinus contorta |
| CAA11219.1 | AJ223281 | Manihot esculenta | AAB38784.1 | U72154 | Brassica nigra |
| AAC49184.1 | U40402 | Hevea brasiliensis | AAD02839.1 | AF082991 | Avena sativa |
| CAA82334.1 | 229091 | Manihot esculenta | AAA87339.1 | L41869 | Hordeum vulgare |
| CAA11428.1 | AJ223506 | Manihot esculenta | AAB71381.1 | U95298 | Manihot esculenta |
| SEQ ID NO. 1279 | | | CAA55196.1 | X78433 | Avena sativa |
| AAG43549.1 | AF211531 | Nicotiana tabacum | AAC49177.1 | U33817 | Sorghum bicolor |
| AAG43548.1 | AF211530 | Nicotiana tabacum | AAD09850.1 | U44087 | Zea mays |
| BAA78738.1 | AB023482 | Oryza sativa | AAG00614.1 | AF293849 | Secale cereale |
| CAC12822.1 | AJ299252 | Nicotiana tabacum | AAF28800.1 | AF112888 | Catharanthus roseus |
| AAF76898.1 | AF274033 | Atriplex hortensis | CAA40058.1 | X56734 | Trifolium repens |
| CAB96899.1 | AJ251249 | Catharanthus roseus | CAA40057.1 | X56733 | Trifolium repens |
| CAB96900.1 | AJ251250 | Catharanthus roseus | AAD105C3.1 | U33816 | Zea mays |
| AAC24587.1 | AF071893 | Prunus armeniaca | AAA65946.1 | U25157 | Zea mays |
| AAK01089.1 | AF298231 | Hordeum vulgare | CAA52293.1 | X74217 | Zea mays |
| BAB16083.1 | AB036883 | Oryza sativa | AAB03266.1 | U44773 | Zea mays |
| BAB03248.1 | AB037183 | Oryza sativa | AAK07429.1 | AF321287 | Musa acuminata |
| AAF23899.1 | AF193803 | Oryza sativa | CAA79989.2 | Z21977 | Brassica napus |
| BAA07321.1 | D38123 | Nicotiana tabacum | AAAB4906.1 | U28047 | Oryza sativa |
| AAG43545.1 | AF211527 | Nicotiana tabacum | CAC08209.1 | AJ005950 | Cicer arietinum |
| AAF63205.1 | AF245119 | Mesembryanthemum crystallinum | SEQ ID NO. 1283 | | |
| AAC62619.1 | AF057373 | Nicotiana tabacum | AAB36223.1 | S81261 | Brassica napus |
| BAA99376.1 | AP002526 | Oryza sativa | AAB36222.1 | S81261 | Brassica napus |
| SEQ ID NO. 1280 | | | AAC49266.1 | U33885 | Brassica napus |
| CAB57457.2 | AJ249786 | Nicotiana tabacum | AAC49265.1 | U33884 | Brassica napus |
| SEQ ID NO. 1282 | | | AAF37266.1 | AF220405 | Vitis riparia |
| | | | AAD28439.1 | AF120092 | Nicotiana tabacum |
| | | | SEQ ID NO. 1284 | | |
| | | | AAD03693.1 | AF084554 | Brassica napus |

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| CAA10372.1 | AJ131455 | Plastid Solanum demissum | SEQ ID NO. 1286 | SEQ ID NO. 1288 | Oryza sativa | SEQ ID NO. 1289 | Oryza sativa |
| CAA50750.1 | X71952 | Capsicum annuum | AAB07452.1 | AAB62693.1 | Sorghum bicolor | BAA94228.1 | Oryza sativa |
| | | | AAB63591.1 | CAA73067.1 | Sorghum bicolor | BAA94224.1 | Oryza sativa |
| | | | AAF60293.1 | CAA73068.1 | Zea mays | BAA94236.1 | Oryza sativa |
| | | | AAB59307.1 | AAF22219.1 | Oryza sativa | BAA94219.1 | Oryza sativa |
| | | | | BAA83688.1 | Triticum aestivum | BAA94215.1 | Oryza sativa |
| | | | | BAA34675.1 | Oryza sativa | AAC49181.1 | Brassica napus |
| | | | | BAA83689.1 | Oryza sativa | AAC49182.1 | Brassica napus |
| | | | | BAA96628.1 | Oryza sativa | BAB21153.1 | Oryza sativa |
| | | | | BAA05649.1 | Nicotiana tabacum | | |
| | | | | AAD23582.1 | Glycine max | | |
| | | | | CAA71142.1 | Cucumis sativus | | |
| | | | | CAA65244.1 | Solanum tuberosum | | |
| | | | | CAA57898.1 | Hordeum vulgare | | |
| | | | | AAC99329.1 | Oryza sativa | | |
| | | | | AAB05457.1 | Oryza sativa | | |
| | | | | CAA07813.1 | Hordeum vulgare | | |
| | | | | CAA46556.1 | Hordeum vulgare | | |
| | | | | CAA46554.1 | Hordeum vulgare | | |
| | | | | AAD00239.1 | Nicotiana tabacum | | |
| | | | | BAA13608.1 | Oryza sativa | | |
| | | | | AAG60195.1 | Oryza sativa | | |
| | | | | BAA19573.1 | Oryza sativa | | |
| | | | | AAB68962.1 | Glycine max | | |
| | | | | CAA89202.1 | Chlamydomonas eugametos | | |
| | | | | AAB58348.1 | Triticum aestivum | | |
| | | | | AAD00240.1 | Nicotiana tabacum | | |
| | | | | CAA06503.1 | Craterostigma plantagineum | | |
| | | | | AAF27340.1 | Vicia faba | | |
| | | | | AAA96325.1 | Triticum aestivum | | |
| | | | | CAA81443.1 | Mesembryanthemum crystallinum | | |
| | | | | AAF21062.1 | Dunaliella tertiolecta | | |

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| AA001633 | Oryza sativa | |
| AA001633 | Oryza sativa | |
| AA001633 | Oryza sativa | |
| AA001633 | Oryza sativa | |
| AA001633 | Oryza sativa | |
| U39289 | Brassica napus | |
| U39319 | Brassica napus | |
| AA002899 | Oryza sativa | |
| | | |
| U43839 | Glycine max | |
| AJ305033 | Pisum sativum | |
| U43838 | Glycine max | |
| U43840 | Glycine max | |
| | | |
| AF215852 | Nicotiana tabacum | |
| AF215851 | Spinacia oleracea | |
| AF215853 | Solanum tuberosum | |
| AF215854 | Zea mays | |
| AF215837 | Apium graveolens var. dulce | |
| Y07520 | Chlorella kessleri | |
| X75440 | Chlorella kessleri | |
| AJ132224 | Lycopersicon esculentum | |
| X55349 | Chlorella kessleri | |
| X66856 | Nicotiana tabacum | |
| AJ010942 | Lycopersicon esculentum | |
| Z93775 | Vicia faba | |
| AB052885 | Oryza sativa | |
| L08196 | Ricinus communis | |
| U38651 | Medicago truncatula | |
| AJ001061 | Vitis vinifera | |
| Y09590 | Vitis vinifera | |
| Z83829 | Picea abies | |
| L08188 | Ricinus communis | |
| AB052884 | Oryza sativa | |
| AB052883 | Oryza sativa | |
| AJ132223 | Lycopersicon esculentum | |
| AP000615 | Oryza sativa | |

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|-----------------|----------|-------------------------|-------------------------|----------|---------------------------|
| CAB52690.1 | AJ132225 | Lycopersicon esculentum | CAB93959.1 | AJ289701 | Vicia faba |
| AAD55054.1 | AF173655 | Beta vulgaris | BAA32777.1 | AB012044 | Raphanus sativus |
| SEQ ID NO. 1293 | | | AAG23179.1 | AF299050 | Brassica oleracea |
| CAA78388.1 | Z13998 | Petunia x hybrida | AAG23180.1 | AF299051 | Brassica oleracea |
| CAA78387.1 | Z13997 | Petunia x hybrida | BAA92258.1 | AB030695 | Raphanus sativus |
| CAA78386.1 | Z13996 | Petunia x hybrida | CAA64896.1 | X95640 | Brassica oleracea |
| | | | AAF65846.1 | AF255796 | Allium cepa |
| SEQ ID NO. 1294 | | | SEQ ID NO. 1300 | | |
| AAG13395.1 | AF283006 | Oryza sativa | AAC39318.1 | AF029858 | Sorghum bicolor |
| AAB18207.1 | U73216 | Triticum aestivum | AAA19701.1 | I24438 | Thlaspi arvense |
| | | | BAB40323.1 | AB037244 | Asparagus officinalis |
| SEQ ID NO. 1296 | | | BAB40324.1 | AB037245 | Asparagus officinalis |
| BAA92260.1 | AB030697 | Raphanus sativus | AAA32913.1 | M32885 | Persea americana |
| AAD39374.1 | AF118383 | Brassica napus | AAB94589.1 | AF022460 | Glycine max |
| BAA92261.1 | AB030698 | Raphanus sativus | AAB94588.1 | AF022459 | Glycine max |
| AAD39373.1 | AF118382 | Brassica napus | CAA70575.1 | Y09423 | Nepeta racemosa |
| BAA32778.1 | AB012045 | Raphanus sativus | AAD47832.1 | AF166332 | Nicotiana tabacum |
| AAC17529.1 | AF067185 | Samanea saman | CAB56503.1 | AJ238612 | Catharanthus roseus |
| AAK26758.1 | AF326491 | Zea mays | AAE27282.1 | AF122821 | Capsicum annuum |
| BAB40141.1 | AB058678 | Pyrus communis | AAB94584.1 | AF022157 | Glycine max |
| AAB67868.1 | U60147 | Beta vulgaris | BAA03635.1 | D14990 | Solanum melongena |
| AAK26761.1 | AF326494 | Zea mays | CAA50645.1 | X71654 | Solanum melongena |
| AAK26760.1 | AF326493 | Zea mays | CAA50312.1 | X70981 | Solanum melongena |
| BAB40143.1 | AB058680 | Pyrus communis | CAA70576.1 | Y09424 | Nepeta racemosa |
| AAK26759.1 | AF326492 | Zea mays | BAB40322.1 | AB036772 | Triticum aestivum |
| AAD28761.1 | AF130975 | Zea mays | AAD44152.1 | AF124817 | Mentha x piperita |
| AAF65845.1 | AF255795 | Allium cepa | AAD44151.1 | AF124816 | Mentha x piperita |
| AAK26763.1 | AF326496 | Zea mays | AAD44150.1 | AF124815 | Mentha spicata |
| AAC16545.1 | AF062393 | Oryza sativa | CAA83941.1 | Z33875 | Mentha x piperita |
| CAB46351.1 | Y18312 | Solanum tuberosum | AAD56282.1 | AF155332 | Petunia x hybrida |
| AAK26762.1 | AF326495 | Zea mays | AAG44132.1 | AF218296 | Pisum sativum |
| AAC32107.1 | AF051202 | Picea mariana | CAC27827.1 | AJ295719 | Catharanthus roseus |
| AAA86991.1 | U18403 | Atriplex canescens | AAD37433.1 | AF150881 | Lycopersicon esculentum x |
| AAG30607.1 | AF314656 | Brassica oleracea | Lycopersicon peruvianum | | |
| AAA99274.1 | L77969 | Spinacia oleracea | AAG14963.1 | AF214009 | Brassica napus |
| CAB07783.1 | Z93764 | Picea abies | CAA57424.2 | X81830 | Zea mays |
| AAG02208.1 | AF290201 | Solanum chacoense | CAA72207.1 | Y11403 | Zea mays |
| AAB67869.1 | U60148 | Beta vulgaris | CAA65580.1 | X96784 | Nicotiana tabacum |
| AAF61463.1 | AF139814 | Triticum aestivum | AAG14962.1 | AF214008 | Brassica napus |
| AAF78062.1 | AF266760 | Vicia faba | AAG14961.1 | AF214007 | Brassica napus |

| SEQ ID NO. 1301 | SEQ ID NO. 1302 | SEQ ID NO. 1303 | Nicotiana tabacum |
|-------------------------|-----------------|-----------------|-------------------------------|
| AAC39318.1 | AF029858 | BAA12039.1 | Spinacia oleracea |
| AAA19701.1 | L24438 | BAA19611.1 | Spinacia oleracea |
| AAA32913.1 | M32885 | BAA24610.1 | Spinacia oleracea |
| BAB40323.1 | AB037244 | BAA24609.1 | Spinacia oleracea |
| BAB40324.1 | AB037245 | AAC19394.1 | Mesembryanthemum crystallinum |
| CAA70575.1 | Y09423 | AAC19393.1 | Mesembryanthemum crystallinum |
| AAD47832.1 | AF166332 | BAA78553.1 | Chloroplast Nicotiana taba |
| CAA50312.1 | X70981 | BAA78552.1 | Chloroplast Nicotiana taba |
| AAB94588.1 | AF022459 | BAA22196.1 | Cucurbita sp. |
| AAB94589.1 | AF022460 | BAA12029.1 | Cucurbita sp. |
| BAA03635.1 | D14990 | CAA11265.1 | Chlamydomonas reinhardtii |
| CAA50645.1 | X71654 | BAA83595.1 | Chlamydomonas sp. W80 |
| AAB94584.1 | AF022157 | AAD30294.1 | Mesembryanthemum crystallinum |
| AAF27282.1 | AF122821 | AAB52954.1 | Gossypium hirsutum |
| CAA70576.1 | Y09424 | AAC08576.1 | Zantedeschia aethiopica |
| AAD44150.1 | AF124815 | AAD43338.1 | Fragaria x ananassa |
| BAB40322.1 | AB036772 | AAD43336.1 | Fragaria x ananassa |
| CAB56503.1 | AJ238612 | AAB95222.1 | Fragaria x ananassa |
| CAA83941.1 | Z33875 | AAD41408.1 | Fragaria x ananassa |
| AAD44151.1 | AF124816 | AAD41407.1 | Fragaria x ananassa |
| AAG44132.1 | AF218296 | AAD41403.1 | Fragaria x ananassa |
| AAD56282.1 | AF155332 | AAD41402.1 | Fragaria x ananassa |
| CAA65580.1 | X96784 | AAD43337.1 | Fragaria x ananassa |
| AAD44152.1 | AF124817 | AAD41406.1 | Fragaria x ananassa |
| AAD37433.1 | AF150881 | AAD41404.1 | Fragaria x ananassa |
| Lycopersicon peruvianum | | AAB94574.1 | Fragaria x ananassa |
| CAC27827.1 | AJ295719 | AAD41405.1 | Fragaria x ananassa |
| CAA64635.1 | X95342 | BAA08264.1 | Oryza sativa |
| AAG14962.1 | AF214008 | BAA13671.1 | Cucumis sativus |
| AAG14961.1 | AF214007 | CAA55209.1 | Raphanus sativus |
| | | BAA12890.1 | Spinacia oleracea |
| SEQ ID NO. 1302 | | AAA99518.1 | Spinacia oleracea |
| AAC19392.1 | AF069314 | BAA12918.1 | Nicotiana tabacum |
| CAA33082.1 | X14959 | AAB03844.1 | Vigna unguiculata |
| AAC04671.1 | AF018174 | CAB58361.1 | Lycopersicon esculentum |
| CAA45098.1 | X63537 | CAA57140.1 | Capsicum annuum |
| AAC49357.1 | U35830 | CAA06996.1 | Hordeum vulgare |
| CAA94534.1 | Z70677 | AAF22246.1 | Pimpinella brachycarpa |
| AAF88067.1 | AF286593 | | |

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|-----------------|----------|------------------------------|-----------------|----------|----------------------|
| AA86689.1 | U15933 | Nicotiana tabacum | BAA33203.1 | AB001885 | Oryza sativa |
| CAA84406.1 | Z34934 | Zea mays | BAA33204.1 | AB001886 | Oryza sativa |
| CAA43992.1 | X62077 | Pisum sativum | BAA33202.1 | AB001884 | Oryza sativa |
| AAA33645.1 | M93051 | Pisum sativum | AAC99309.1 | AF052584 | Malus x domestica |
| AAB01221.1 | U56634 | Glycine max | AAC99310.1 | AF052585 | Malus x domestica |
| BAB20889.1 | AB053297 | Oryza sativa | AAC35496.1 | AF052690 | Raphanus sativus |
| CAA72247.1 | Y11461 | Brassica napus | AAG27547.1 | AF269128 | Brassica nigra |
| BAB17666.1 | AB050724 | Oryza sativa subsp. japonica | AAG27546.1 | AF269126 | Brassica nigra |
| AAD20022.1 | AF127804 | Glycine max | AAC27696.1 | AF016011 | Brassica napus |
| AAB94927.1 | AF038839 | Brassica juncea | AAC27695.1 | AF016010 | Brassica napus |
| | | | AAC27694.1 | AF016009 | Brassica napus |
| | | | AAG24863.1 | AF300700 | Ipomoea nil |
| | | | AAD22518.1 | AF001136 | Pinus radiata |
| | | | BAA33206.1 | AB001888 | Oryza sativa |
| | | | BAA33200.1 | AB001882 | Oryza sativa |
| SEQ ID NO. 1304 | | | SEQ ID NO. 1307 | | |
| BAA97124.1 | AB016266 | Nicotiana sylvestris | AAG25966.1 | AF302082 | Nicotiana tabacum |
| BAA97122.1 | AB016264 | Nicotiana sylvestris | AAC27894.1 | AF023164 | Zea mays |
| BAA87068.1 | AB035270 | Matricaria chamomilla | AAC27895.1 | AF023165 | Zea mays |
| AAC50047.1 | U89255 | Lycopersicon esculentum | AAF66615.1 | AF142596 | Nicotiana tabacum |
| BAA07321.1 | D38123 | Nicotiana tabacum | CAB41878.1 | Y18259 | Brassica oleracea |
| AAC49740.1 | U89256 | Lycopersicon esculentum | CAB41879.1 | Y18260 | Brassica oleracea |
| AAC62619.1 | AF057373 | Nicotiana tabacum | AAK21965.1 | AY028699 | Brassica napus |
| CAB96899.1 | AJ251249 | Catharanthus roseus | AAD21872.1 | AF078082 | Phaseolus vulgaris |
| CAB96900.1 | AJ251250 | Catharanthus roseus | CAA97692.1 | Z73295 | Catharanthus roseus |
| AAB38748.1 | U81157 | Nicotiana tabacum | CA74661.1 | Y14285 | Brassica oleracea |
| AAF05606.1 | AF190770 | Oryza sativa | AAC23542.1 | U20948 | Ipomoea trifida |
| AAC29516.1 | U77655 | Solanum tuberosum | AAG16628.1 | AY007545 | Brassica napus |
| BAB03248.1 | AB037183 | Oryza sativa | BAA94509.1 | AB041503 | Populus nigra |
| BAA97123.1 | AB016265 | Nicotiana sylvestris | BAA23676.1 | AB000970 | Brassica rapa |
| BAA76734.1 | AB024575 | Nicotiana tabacum | CAA47962.1 | X67733 | Zea mays |
| AAD00708.1 | U91857 | Stylosanthes hamata | CAAG7145.1 | X98520 | Brassica oleracea |
| AAC49741.1 | U89257 | Lycopersicon esculentum | AAB09771.1 | U67422 | Zea mays |
| AAD45623.1 | AF084185 | Brassica napus | CAA74662.1 | Y14286 | Brassica oleracea |
| AAG59619.1 | AF243384 | Oryza sativa | BAA94510.1 | AB041504 | Populus nigra |
| AAK01089.1 | AF298231 | Hordeum vulgare | AAB93834.1 | U82481 | Zea mays |
| | | | CAA73133.1 | Y12530 | Brassica oleracea |
| SEQ ID NO. 1305 | | | BAA06538.1 | D31737 | Nicotiana tabacum |
| AAG17172.1 | AF190881 | Populus tremula x Populus | AAF43496.1 | AF131222 | Lophopyrum elongatum |
| tremuloides | | | AAK11674.1 | AF339747 | Lophopyrum elongatum |
| CAC24691.1 | AJ132363 | Brassica juncea | | | |
| AAC39514.1 | AF056027 | Oryza sativa | | | |
| SEQ ID NO. 1306 | | | | | |
| BAA33201.1 | AB001883 | Oryza sativa | | | |

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|-----------------|----------|----------------------------|-----------------|----------|----------------------------|
| BAB21001.1 | AB054061 | Brassica rapa | SEQ ID NO. 1315 | AP000615 | Oryza sativa |
| BAA78764.1 | AB023482 | Oryza sativa | BAA85398.1 | AF215852 | Nicotiana tabacum |
| BAA07576.1 | D38563 | Brassica rapa | AAF74566.1 | AF215837 | Apium graveolens var. dulc |
| AAB47422.1 | U59318 | Lycopersicon esculentum | AAG43998.1 | AF215853 | Solanum tuberosum |
| BAA21132.1 | D88193 | Brassica rapa | AAF74567.1 | AF215854 | Zea mays |
| | | | AAF74568.1 | AF215851 | Spinacia oleracea |
| SEQ ID NO. 1308 | | | AAF74565.1 | X75440 | Chlorella kessleri |
| BAA20482.1 | D85610 | Spinacia oleracea | CAA53192.1 | Y07520 | Chlorella kessleri |
| AAC50011.1 | U85494 | Zea mays | CAA68813.1 | Z83829 | Picea abies |
| AAC50021.1 | U85495 | Zea mays | CAB06079.1 | X55349 | Chlorella kessleri |
| BAA77218.1 | AB026197 | Lithospermum erythrorhizon | CAA39036.1 | X66856 | Nicotiana tabacum |
| | | | CAA47324.1 | Z93775 | Vicia faba |
| SEQ ID NO. 1311 | | | CAB07812.1 | U38651 | Medicago truncatula |
| AAG41777.1 | AF212991 | Cucurbita maxima | AA066594.1 | L08196 | Ricinus communis |
| AAK11616.1 | AF326277 | Hordeum vulgare | CAA09419.1 | AJ132224 | Lycopersicon esculentum |
| AAK00946.1 | AF318211 | Taxus cuspidata | AAD55054.1 | AF173655 | Lycopersicon esculentum |
| AAC49659.1 | U74319 | Sorghum bicolor | BAB19863.1 | AB052884 | Beta vulgaris |
| AAA17732.1 | L19074 | Catharanthus roseus | CAA70777.1 | Y09590 | Oryza sativa |
| CAB56503.1 | AJ238612 | Catharanthus roseus | CAA04511.1 | AJ001061 | Vitis vinifera |
| AAB17070.1 | U54770 | Lycopersicon esculentum | BAB19864.1 | AB052885 | Vitis vinifera |
| CAB41490.1 | AJ238439 | Cicer arietinum | CAB52690.1 | AJ132225 | Oryza sativa |
| AAD44150.1 | AF124815 | Mentha spicata | BAB19862.1 | AB052883 | Lycopersicon esculentum |
| BAA74465.1 | AB022732 | Glycyrrhiza echinata | CAB52688.1 | AJ132223 | Oryza sativa |
| BAA22422.1 | AB001379 | Glycyrrhiza echinata | | | Lycopersicon esculentum |
| CAA10067.1 | AJ012581 | Cicer arietinum | | | |
| BAB40322.1 | AB036772 | Triticum aestivum | | | |
| CAB43505.1 | AJ239051 | Cicer arietinum | SEQ ID NO. 1316 | X69165 | Solanum tuberosum |
| CAB56742.1 | AJ249800 | Cicer arietinum | CAA48915.1 | AF167416 | Apium graveolens |
| AAF89209.1 | AF279252 | Vigna radiata | AAD45391.1 | AF167415 | Apium graveolens |
| BAA93634.1 | AB025016 | Lotus japonicus | AAC99332.1 | AF063400 | Apium graveolens |
| CAA04116.1 | AJ000477 | Helianthus tuberosus | AAF65765.1 | AF242307 | Euphorbia esula |
| CAA04117.1 | AJ000478 | Helianthus tuberosus | CAA57727.1 | X82276 | Nicotiana tabacum |
| AAF34534.1 | AF195813 | Lupinus albus | CAA53390.1 | X75764 | Plantago major |
| CAA83941.1 | Z33875 | Mentha x piperita | CAC19689.1 | AJ303199 | Daucus carota |
| AAF34533.1 | AF195812 | Pisum sativum | BAA89458.1 | AB036758 | Daucus carota |
| AAF45142.1 | AF195818 | Glycine max | CAA83436.1 | Z31561 | Ricinus communis |
| | | | AAF04294.1 | AF191024 | Asarina barclaiana |
| SEQ ID NO. 1313 | | | CAA76369.1 | Y16768 | Daucus carota |
| AAD01804.1 | AF026480 | Dianthus caryophyllus | CAB07811.1 | Z93774 | Vicia faba |
| AAB07724.1 | U55867 | Ipomoea nil | AAD53000.1 | U64967 | Beta vulgaris |

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|-----------------|----------|----------------------------|------------|----------|---------------------------|
| CAA47604.1 | X67125 | Spinacia oleracea | CAA62150.1 | X90560 | Physcomitrella patens |
| AAD41024.1 | AF109922 | Pisum sativum | BAA94696.1 | AB041711 | Chara corallina |
| CAA58730.1 | X83850 | Beta vulgaris | BAA96536.1 | AB044286 | Chara corallina |
| AAF04295.1 | AF191025 | Alonsoa meridionalis | BAA94697.1 | AB041712 | Chara corallina |
| AAD34610.1 | AF149981 | Nicotiana tabacum | BAA87825.1 | AP000815 | Oryza sativa |
| CAA59113.1 | X84379 | Plantago major | CAA61980.1 | X89890 | Bidens pilosa |
| CAA57726.1 | X82275 | Lycopersicon esculentum | AAA19571.1 | U10150 | Brassica napus |
| CAA76368.1 | Y16767 | Daucus carota | AAA87347.1 | M88307 | Brassica juncea |
| CAA76367.1 | Y16766 | Daucus carota | CAA74111.1 | Y13784 | Mougeotia scalaris |
| CAC19688.1 | AJ303198 | Daucus carota | AAA92677.1 | U13736 | Pisum sativum |
| CAA12256.1 | AJ224961 | Ricinus communis | AAA33083.1 | M20729 | Chlamydomonas reinhardtii |
| AAD55269.1 | AF182445 | Vitis vinifera | AAK25753.1 | AF334833 | Castanea sativa |
| AAG09270.1 | AF176950 | Lycopersicon esculentum | AAF73157.1 | AF150059 | Brassica napus |
| AAG25923.1 | AF237780 | Solanum tuberosum | CAA74307.1 | Y13974 | Zea mays |
| CAB75881.1 | AJ272308 | Hordeum vulgare | AAA34238.1 | L20507 | Vigna radiata |
| CAC33492.1 | AJ310643 | Ricinus communis | AAA34237.1 | L20691 | Vigna radiata |
| CAB75882.1 | AJ272309 | Hordeum vulgare | AAC49587.1 | U49105 | Triticum aestivum |
| AAF90181.1 | AF280050 | Oryza sativa subsp. indica | AAC49586.1 | U49104 | Triticum aestivum |
| BAA24071.1 | D87819 | Oryza sativa | AAC49585.1 | U49103 | Triticum aestivum |
| BAA83501.1 | AB008464 | Zea mays | AAC49584.1 | U48693 | Triticum aestivum |
| AAD45932.1 | AF168771 | Betula pendula | AAC49580.1 | U48689 | Triticum aestivum |
| AAG12987.1 | AF166498 | Lycopersicon esculentum | AAC49579.1 | U48688 | Triticum aestivum |
| BAA76434.1 | AB025006 | Cicer arietinum | AAC49578.1 | U48242 | Triticum aestivum |
| | | | AAB36130.1 | S81594 | Vigna radiata |
| SEQ ID NO. 1319 | | | AAA92681.1 | U13882 | Pisum sativum |
| AAB65777.1 | U97522 | Vitis vinifera | AAA33706.1 | M80836 | Petunia x hybrida |
| AAB65776.1 | U97521 | Vitis vinifera | AAA33705.1 | M80831 | Petunia x hybrida |
| CAC17793.1 | AJ301671 | Nicotiana sylvestris | CAA78287.1 | Z12827 | Oryza sativa |
| AAA34070.1 | M15173 | Nicotiana tabacum | CAA46150.1 | X65016 | Oryza sativa |
| CAA30142.1 | X07130 | Solanum tuberosum | CAA36644.1 | X52398 | Medicago sativa |
| CAA53626.1 | X76041 | Triticum aestivum | CAA43143.1 | X60738 | Malus x domestica |
| | | | CAA78301.1 | Z12839 | Lilium longiflorum |
| SEQ ID NO. 1320 | | | AAB68399.1 | U79736 | Helianthus annuus |
| CAA11219.1 | AJ223281 | Manihot esculenta | CAA42423.1 | X59751 | Daucus carota |
| AAC49184.1 | U040402 | Hevea brasiliensis | AAA32938.1 | M27303 | Hordeum vulgare |
| CAA82334.1 | Z29091 | Manihot esculenta | BAA88540.1 | AP000969 | Oryza sativa |
| CAA11428.1 | AJ223506 | Manihot esculenta | AAG27432.1 | AF295637 | Elaeis guineensis |
| | | | AAG11418.1 | AF292108 | Prunus avium |
| SEQ ID NO. 1322 | | | AAC36059.1 | AF042840 | Oryza sativa |
| AAK11255.1 | AF329729 | Nicotiana tabacum | | | |
| AAD10245.1 | AF030033 | Phaseolus vulgaris | | | |

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| AAF61440.1 | AAF138264 | Ipomoea batatas | AAC14577.1 | U72396 | Lycopersicon esculentum |
| AAF61442.1 | AAF138266 | Ipomoea batatas | CAA65020.1 | X95716 | Petroselinum crispum |
| AAF61441.1 | AAF138265 | Ipomoea batatas | AAB39336.1 | M99430 | Ipomoea nil |
| AAD29084.1 | AF082181 | Solanum melongena | AAA33670.1 | M33901 | Pisum sativum |
| AAK27969.1 | AF242373 | Ipomoea batatas | AAD41409.1 | AF159562 | Prunus dulcis |
| CAA08906.1 | AJ009878 | Cicer arietinum | CAA67206.1 | X98617 | Medicago sativa |
| CAA78403.1 | Z14028 | Lycopersicon esculentum | AAC36312.1 | AF090115 | Lycopersicon esculentum |
| CAB17075.1 | Z99953 | Phaseolus vulgaris | CAA38012.1 | X54075 | Zea mays |
| BAA92495.1 | AB038598 | Vigna mungo | CAA38013.1 | X54076 | Zea mays |
| AAB67878.1 | U59465 | Vicia faba | CAA41218.1 | X58279 | Triticum aestivum |
| CAA82995.1 | Z30338 | Vicia sativa | AAB26481.1 | S59777 | Zea mays |
| BAA08244.1 | D45402 | Zea mays | AAB01561.1 | L47717 | Picea glauca |
| CAB17077.1 | Z99955 | Phaseolus vulgaris | AAB39335.1 | M99429 | Ipomoea nil |
| CAB16316.1 | Z99172 | Vicia sativa | AAB01562.1 | L47740 | Picea glauca |
| CAA83673.1 | Z32795 | Glycine max | CAA67726.1 | X99346 | Picea abies |
| CAB53397.1 | AJ245868 | Medicago sativa | AAD09184.1 | AF089845 | Funaria hygrometrica |
| AAB62937.1 | AF007215 | Lavatera thuringiaca | BAA04841.1 | D21817 | Lilium longiflorum |
| CAA57675.1 | X82185 | Zea mays | BAA04842.1 | D21818 | Lilium longiflorum |
| BAA96501.1 | AB032168 | Nicotiana tabacum | AAD09185.1 | AF089846 | Funaria hygrometrica |
| CAB17076.1 | Z99954 | Phaseolus vulgaris | BAA04840.1 | D21816 | Lilium longiflorum |
| AAB68374.1 | U52970 | Phaseolus vulgaris | CAA63570.1 | X92983 | Pseudotsuga menziesii |
| CAA12118.1 | AJ224766 | Phaseolus vulgaris | CAA63571.1 | X92984 | Pseudotsuga menziesii |
| AAD48496.1 | AF172856 | Lycopersicon esculentum | AAD30452.1 | AF123255 | Lycopersicon esculentum |
| CAB17074.1 | Z99952 | Phaseolus vulgaris | AAD09178.1 | AF087640 | Funaria hygrometrica |
| CAA05894.1 | AJ003137 | Lycopersicon esculentum | AAB63311.1 | U46545 | Helianthus annuus |
| AAD53012.1 | AF089849 | Brassica napus | CAA39603.1 | X56138 | Lycopersicon esculentum |
| CAB53515.1 | AJ245924 | Solanum tuberosum | AAC39360.1 | U63631 | Fragaria x ananassa |
| CAA88629.1 | Z48736 | Lycopersicon esculentum | AAA33672.1 | M33899 | Pisum sativum |
| AAC49455.1 | U41902 | Pseudotsuga menziesii | AAD30453.1 | AF123256 | Lycopersicon esculentum |
| AAB70820.2 | AF019145 | Zea mays | AAD30454.1 | AF123257 | Lycopersicon esculentum |
| CAB16317.1 | Z99173 | Nicotiana tabacum | CAA41547.1 | X58711 | Medicago sativa |
| AAK27968.1 | AF242372 | Ipomoea batatas | CAA31785.1 | X13431 | Triticum aestivum |
| BAA88898.1 | AB020961 | Zea mays | AAB39856.1 | U81385 | Oryza sativa |
| AAD53011.1 | AF089848 | Brassica napus | CAA41546.1 | X58710 | Medicago sativa |
| AAA79915.1 | U17135 | Dianthus caryophyllus | CAA63901.1 | X94191 | Pennisetum glaucum |
| AAB88263.1 | AF019147 | Zea mays | AAA33910.1 | M80939 | Oryza sativa |
| AAB97142.1 | U93166 | Prunus armeniaca | AAA33909.1 | M80938 | Oryza sativa |
| AAC35211.1 | U12637 | Hemerocallis hybrid cultivar | CAA43210.1 | X60820 | Oryza sativa |
| SEQ ID NO. 1325 | | | AAB03097.1 | U21723 | Glycine max |
| CAA82653.1 | Z29554 | Helianthus annuus | AAC78394.1 | U83671 | Oryza sativa |
| | | | AAC78392.1 | U83669 | Oryza sativa |

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|-----------------|----------|-------------------------|---------------------------|
| AAD09182.1 | AF089843 | Funaria hygrometrica | Lycopersicon esculentum |
| SEQ ID NO. 1326 | | | Pseudotsuga menziesii |
| AAB72109.1 | AF022217 | Brassica rapa | Triticum aestivum |
| CAA08908.1 | AJ009880 | Castanea sativa | Medicago sativa |
| AAD49336.1 | AF166277 | Nicotiana tabacum | |
| CAA41547.1 | X58711 | Medicago sativa | |
| CAB36910.1 | AJ000691 | Quercus suber | Pisum sativum |
| AAC39360.1 | U63631 | Fragaria x ananassa | Lycopersicon esculentum |
| BAA33062.1 | AB017273 | Cuscuta japonica | Chenopodium rubrum |
| AAB03893.1 | M11318 | Glycine max | Glycine max |
| CAA37847.1 | X53851 | Daucus carota | Zea mays |
| AAA61632.1 | U08601 | Papaver somniferum | Triticum aestivum |
| AAA33975.1 | M11395 | Glycine max | Picea glauca |
| AAA33672.1 | M33899 | Pisum sativum | Triticum aestivum |
| AAB63311.1 | U46545 | Helianthus annuus | Plastid Petunia x hybrida |
| CAB08441.1 | Z95153 | Helianthus annuus | Funaria hygrometrica |
| CAA42222.1 | X59701 | Helianthus annuus | Lycopersicon esculentum |
| CAA25578.1 | X01104 | Glycine max | Chloroplast Lycopersicon |
| CAA37848.1 | X53852 | Daucus carota | |
| AAA33974.1 | M11317 | Glycine max | Nicotiana tabacum |
| CAB55634.2 | AJ237596 | Helianthus annuus | Funaria hygrometrica |
| AAA33910.1 | M80939 | Oryza sativa | Oryza sativa |
| AAA33909.1 | M80938 | Oryza sativa | Triticum aestivum |
| CAA43210.1 | X60820 | Oryza sativa | Triticum aestivum |
| AAC78392.1 | U83669 | Oryza sativa | Triticum aestivum |
| AAB63310.1 | U46544 | Helianthus annuus | Triticum aestivum |
| AAB39856.1 | U81385 | Oryza sativa | Triticum aestivum |
| AAD30454.1 | AF123257 | Lycopersicon esculentum | Zea mays |
| BAA02160.1 | D12635 | Oryza sativa | Nicotiana sylvestris |
| CAA63903.1 | X94193 | Pennisetum glaucum | Nicotiana tomentosiformis |
| CAA37864.1 | X53870 | Chenopodium rubrum | Nicotiana tabacum |
| AAD30452.1 | AF123255 | Lycopersicon esculentum | Agrostis stolonifera var. |
| CAA46641.1 | X65725 | Zea mays | |
| CAA63902.1 | X94192 | Pennisetum glaucum | Lycopersicon esculentum |
| CAA63901.1 | X94191 | Pennisetum glaucum | Lycopersicon esculentum |
| CAA63570.1 | X92983 | Pseudotsuga menziesii | Lycopersicon esculentum |
| AAC78393.1 | U83670 | Oryza sativa | Lycopersicon esculentum |
| CAA39603.1 | X56138 | Lycopersicon esculentum | Nicotiana tabacum |
| AAC78394.1 | U83671 | Oryza sativa | Malus x domestica |
| AAA33671.1 | M33900 | Pisum sativum | Fragaria x ananassa |
| AAD30453.1 | AF123256 | | |
| CAA63571.1 | X92984 | | |
| CAA31785.1 | X13431 | | |
| CAA41546.1 | X58710 | | |
| SEQ ID NO. 1327 | | | |
| CAA60120.1 | X86222 | | |
| BAA32547.1 | AB017134 | | |
| CAA33388.1 | X15333 | | |
| AAB03096.1 | U21722 | | |
| AAC12279.1 | AF035460 | | |
| AAD03604.1 | AF104107 | | |
| AAB01557.1 | L47741 | | |
| AAD03605.1 | AF104108 | | |
| CAA38037.1 | X54103 | | |
| AAF19022.1 | AF197942 | | |
| AAB49626.1 | U59917 | | |
| AAB07023.1 | U66300 | | |
| esculentum | | | |
| BAA29064.1 | D88584 | | |
| AAF19021.1 | AF197941 | | |
| BAA78385.1 | AB020973 | | |
| CAA41219.1 | X58280 | | |
| AAC96315.1 | AF097657 | | |
| AAC96316.1 | AF097658 | | |
| AAC96314.1 | AF097656 | | |
| CAA47745.1 | X67328 | | |
| AAC96317.1 | AF097659 | | |
| AAA33477.1 | L28712 | | |
| BAA29066.1 | AB006043 | | |
| BAA29067.1 | AB006044 | | |
| BAA29065.1 | AB006041 | | |
| AAC01570.1 | AF019144 | | |
| palustris | | | |
| AAD30452.1 | AF123255 | | |
| CAA39603.1 | X56138 | | |
| AAD30453.1 | AF123256 | | |
| AAD30454.1 | AF123257 | | |
| AAD49336.1 | AF166277 | | |
| AAF34133.1 | AF161179 | | |
| AAC39360.1 | U63631 | | |

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|-----------------|----------|------------------------|-----------------|----------|----------------------------|
| AAA61632.1 | U08601 | Papaver somniferum | AAB81079.1 | AF022390 | Hordeum vulgare |
| CAA08908.1 | AJ009880 | Castanea sativa | AAC32817.1 | AF050180 | Oryza sativa |
| AAA33975.1 | M11395 | Glycine max | CAB88029.1 | AJ276389 | Dendrobium grex Madame Thc |
| CAA63570.1 | X92983 | Pseudotsuga menziesii | AAB41849.1 | U65648 | Solanum tuberosum |
| AAA03893.1 | M11318 | Glycine max | AAD00252.1 | U76408 | Lycopersicon esculentum |
| CRA25578.1 | X01104 | Glycine max | BAB18584.1 | AB043956 | Ceratopteris richardii |
| AAB72109.1 | AF022217 | Brassica rapa | BAA31700.1 | AB016001 | Ipomoea nil |
| CAA46641.1 | X65725 | Zea mays | BAA31699.1 | AB016000 | Ipomoea nil |
| CAB08441.1 | Z95153 | Helianthus annuus | AAD00692.1 | U90092 | Picea mariana |
| AAA33974.1 | M11317 | Glycine max | BAB18582.1 | AB043954 | Ceratopteris richardii |
| SEQ ID NO. 1329 | | | AAD13611.1 | AF100455 | Zea mays |
| AAG35658.1 | AF204925 | Petroselinum crispum | BAB18583.1 | AB043955 | Ceratopteris richardii |
| CAA88331.1 | Z48431 | Avena fatua | BAA31698.1 | AB015999 | Ipomoea nil |
| AAC37515.1 | L44134 | Cucumis sativus | AAC33008.1 | AF080104 | Pisum sativum |
| AAD16138.1 | AF096298 | Nicotiana tabacum | AAG27464.1 | AF308454 | Medicago truncatula |
| AAC49529.1 | U58540 | Petroselinum crispum | AAD00251.1 | U76407 | Lycopersicon esculentum |
| BAA77383.1 | AB020590 | Nicotiana tabacum | AAC49917.1 | AF000141 | Lycopersicon esculentum |
| BAA82107.1 | AB022693 | Nicotiana tabacum | AAD09582.1 | U76409 | Lycopersicon esculentum |
| AAF23898.1 | AF193802 | Oryza sativa | AAF23753.2 | AF193813 | Brassica oleracea |
| AAD16139.1 | AF096299 | Nicotiana tabacum | AAD00691.1 | U90091 | Picea mariana |
| BAA86031.1 | AB026890 | Nicotiana tabacum | AAC32818.1 | AF050181 | Oryza sativa |
| CAA88326.1 | Z48429 | Avena fatua | SEQ ID NO. 1340 | | |
| AAC31956.1 | AF080595 | Pimpinella brachycarpa | AAD11482.1 | U51192 | Glycine max |
| AAD55974.1 | AF121353 | Petroselinum crispum | AAD11481.1 | U51191 | Glycine max |
| AAC49527.1 | U48831 | Petroselinum crispum | AAA65637.1 | L13654 | Lycopersicon esculentum |
| BAB16432.1 | AB041520 | Nicotiana tabacum | CAA76374.2 | Y16776 | Spinacia oleracea |
| AAC49528.1 | U56834 | Petroselinum crispum | AAA65636.1 | L13653 | Lycopersicon esculentum |
| BAA77358.1 | AB020023 | Nicotiana tabacum | BAA03644.1 | D14997 | Oryza sativa |
| AAG35659.1 | AF204926 | Petroselinum crispum | CAA80502.1 | Z22920 | Spirodela polyrrhiza |
| AAF61864.1 | AF193771 | Nicotiana tabacum | BAA07664.1 | D42065 | Nicotiana tabacum |
| AAF61863.1 | AF193770 | Nicotiana tabacum | BAA07663.1 | D42064 | Nicotiana tabacum |
| BAA87069.1 | AB035271 | Matricaria chamomilla | AAA32676.1 | M37637 | Arachis hypogaea |
| SEQ ID NO. 1332 | | | BAA77387.1 | AB024437 | Scutellaria baicalensis |
| CAB53493.1 | AJ245900 | Oryza sativa | CAC21393.1 | AJ401276 | Zea mays |
| BAA85440.1 | AP000616 | Oryza sativa | AAB67737.1 | L77080 | Stylosanthes humilis |
| BAA90626.1 | AP001129 | Oryza sativa | AAF63024.1 | AF244921 | Spinacia oleracea |
| SEQ ID NO. 1337 | | | BAA82307.1 | AB027753 | Nicotiana tabacum |
| AAF43095.1 | AF053769 | Malus x domestica | CAA64413.1 | X94943 | Lycopersicon esculentum |
| | | | AAC98519.1 | AF007211 | Glycine max |
| | | | AAD37427.1 | AF149277 | Phaseolus vulgaris |

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|-----------------|----------|-------------------------------|-----------------|----------|----------------------|
| CAB94692.1 | AJ242742 | Ipomoea batatas | AAC49150.1 | U21940 | Cladrastis kentukea |
| CAB62226.1 | X90693 | Medicago sativa | CAB96391.1 | AJ271873 | Phaseolus lunatus |
| CAB62227.1 | X90694 | Medicago sativa | CAB96392.1 | AJ271874 | Phaseolus lunatus |
| AAB41811.1 | L36157 | Medicago sativa | CAA76366.1 | Y16754 | Medicago sativa |
| AAD37429.2 | AF149279 | Phaseolus vulgaris | BAA82556.1 | AB030083 | Populus nigra |
| CAA71494.1 | Y10468 | Spinacia oleracea | CAA93830.1 | 270000 | Phaseolus lunatus |
| AAD11484.1 | U51194 | Glycine max | AAG16779.1 | AF190633 | Ulex europaeus |
| CAC21391.1 | AJ401274 | Zea mays | AAC49136.1 | U21958 | Cladrastis kentukea |
| AAA34108.1 | J02979 | Nicotiana tabacum | AAB39933.1 | U65009 | Maackia amurensis |
| AAD37430.1 | AF149280 | Phaseolus vulgaris | AAB39934.1 | U65010 | Maackia amurensis |
| AAF63027.1 | AF244924 | Spinacia oleracea | AAA33766.1 | L26237 | Phaseolus lunatus |
| CAA62225.1 | X90692 | Medicago sativa | AAA33143.1 | M34270 | Dolichos biflorus |
| AAD37375.1 | AF145349 | Glycine max | CAA57697.1 | X82216 | Medicago truncatula |
| CAB67121.1 | Y19023 | Lycopersicon esculentum | BAA36413.1 | AB012632 | Robinia pseudoacacia |
| AAB41810.1 | L36156 | Medicago sativa | AAA80182.1 | U12783 | Robinia pseudoacacia |
| CAA66037.1 | X97351 | Populus balsamifera subsp. | BAA04604.1 | D17757 | Robinia pseudoacacia |
| trichocarpa | | | CAA68497.1 | Y00440 | Pisum sativum |
| BAA92500.1 | AP001383 | Oryza sativa | AAC49271.1 | U24249 | Robinia pseudoacacia |
| BAA94962.1 | AB042103 | Asparagus officinalis | AAA80181.1 | U12782 | Robinia pseudoacacia |
| AAB97734.1 | AF014502 | Glycine max | BAA36416.1 | AB012635 | Robinia pseudoacacia |
| CAA50597.1 | X71593 | Lycopersicon esculentum | AAA33676.1 | M18160 | Pisum sativum |
| BAA01992.1 | D11396 | Nicotiana tabacum | CAA47011.1 | X66368 | Pisum sativum |
| CAA40796.1 | X57564 | Armoracia rusticana | AAA33141.1 | J02721 | Dolichos biflorus |
| AAD11483.1 | U51193 | Glycine max | BAA36414.1 | AB012633 | Robinia pseudoacacia |
| AAF63026.1 | AF244923 | Spinacia oleracea | BAA02049.1 | D12481 | Bauhinia purpurea |
| AAF65464.2 | AF247700 | Oryza sativa | AAA80183.1 | U12784 | Robinia pseudoacacia |
| BAA11853.1 | D83225 | Populus nigra | AAC49272.1 | U24250 | Robinia pseudoacacia |
| BAA06335.1 | D30653 | Populus kitakamiensis | AAA82737.1 | U18296 | Medicago sativa |
| SEQ ID NO. 1342 | | | AAA74571.1 | U22468 | Arachis hypogaea |
| AAG14455.1 | AF283707 | Tulipa gesneriana | AAB51441.1 | U63011 | Sophora japonica |
| AAG14454.1 | AF283706 | Tulipa gesneriana | AAA74574.1 | U22471 | Arachis hypogaea |
| AAG14456.1 | AF283708 | Tulipa gesneriana | AAG00508.1 | AF285121 | Sophora flavescens |
| AAC08401.1 | AF053564 | Mesembryanthemum crystallinum | AAB39932.1 | U65008 | Maackia amurensis |
| SEQ ID NO. 1346 | | | SEQ ID NO. 1347 | | |
| AAB51442.1 | U63012 | Sophora japonica | BAA85400.1 | AP000615 | Oryza sativa |
| CAA93829.1 | Z69999 | Phaseolus lunatus | CAA74909.1 | Y14573 | Hordeum vulgare |
| BAA36415.1 | AB012634 | Robinia pseudoacacia | CAB06083.1 | Z83834 | Hordeum vulgare |
| CAA93828.1 | Z69998 | Phaseolus lunatus | CAA06487.1 | AJ005341 | Linum usitatissimum |
| AAC49137.1 | U21959 | Cladrastis kentukea | SEQ ID NO. 1349 | | |

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|-----------------|----------|-------------------------|-----------------|----------|-------------------------|
| BAA97124.1 | AB016266 | Nicotiana sylvestris | CAA72133.1 | Y11268 | Lycopersicon esculentum |
| BAA97122.1 | AB016264 | Nicotiana sylvestris | CAA60737.1 | X87323 | Capsicum annuum |
| BAA07321.1 | D38123 | Nicotiana tabacum | AAC78504.1 | U34754 | Phaseolus vulgaris |
| BAA87068.1 | AB035270 | Matricaria chamomilla | AAA02563.1 | M57400 | Phaseolus vulgaris |
| AAC62619.1 | AF057373 | Nicotiana tabacum | CAA65826.1 | X97188 | Capsicum annuum |
| AAD00708.1 | U91857 | Stylosanthes hamata | AAD08699.1 | AF098292 | Lycopersicon esculentum |
| BAA97123.1 | AB016265 | Nicotiana sylvestris | AAA69908.1 | U13054 | Lycopersicon esculentum |
| BAA76734.1 | AB024575 | Nicotiana tabacum | CAB43938.1 | AJ006349 | Lycopersicon esculentum |
| AAF05606.1 | AF190770 | Oryza sativa | BAA96207.1 | AP002094 | Fragaria x ananassa |
| BAB03248.1 | AB037183 | Oryza sativa | BAA96209.1 | AP002094 | Oryza sativa |
| SEQ ID NO. 1352 | | | CAB51903.1 | AJ242807 | Oryza sativa |
| AAC24835.1 | AF061870 | Helianthus annuus | BAA94257.1 | AB040769 | Brassica napus |
| SEQ ID NO. 1353 | | | AAC49704.1 | U78526 | Hordeum vulgare |
| CAA75575.1 | Y15293 | Medicago truncatula | AAA20082.1 | U00730 | Lycopersicon esculentum |
| BAA85440.1 | AP000616 | Oryza sativa | CAA11301.1 | AJ223386 | Glycine max |
| CAB53493.1 | AJ245900 | Oryza sativa | CAA11302.1 | AJ223387 | Fragaria x ananassa |
| BAA85424.2 | AP000616 | Oryza sativa | BAA21111.1 | D88417 | Fragaria x ananassa |
| BAA85439.1 | AP000616 | Oryza sativa | CAA65598.1 | X96854 | Gossypium hirsutum |
| BAA90641.1 | AP001129 | Oryza sativa | SEQ ID NO. 1355 | | Prunus persica |
| SEQ ID NO. 1354 | | | CAA64798.1 | X95552 | Cucumis melo |
| AAA80495.1 | U20590 | Lycopersicon esculentum | CAA57285.1 | X81629 | Brassica oleracea |
| BAB39482.1 | AB049199 | Populus alba | AAA32981.1 | L27664 | Brassica napus |
| BAA85150.1 | AB032830 | Pisum sativum | CAA57284.1 | X81628 | Brassica oleracea |
| AAC12684.1 | U76725 | Pinus radiata | AAB70883.1 | U19856 | Pelargonium x hortorum |
| AAC62241.1 | AF077339 | Lycopersicon esculentum | AAF36484.1 | AF129074 | Prunus persica |
| CAA65828.1 | X97190 | Capsicum annuum | CAA90904.1 | Z54199 | Lycopersicon esculentum |
| CAB59900.1 | AJ010950 | Capsicum annuum | CAA71738.1 | Y10749 | Betula pendula |
| BAB32562.1 | AB055886 | Atriplex lentiformis | BAA21541.1 | AB003514 | Actinidia deliciosa |
| BAA77239.1 | AB025796 | Populus alba | CAA67216.1 | X98627 | Malus x domestica |
| BAB39483.1 | AB049200 | Populus alba | CAA04895.1 | AJ001646 | Malus x domestica |
| AAC12685.1 | U76756 | Pinus radiata | AAC36461.1 | AF030859 | Malus x domestica |
| CAA65597.1 | X96853 | Prunus persica | AAC37381.1 | I21976 | Petunia x hybrida |
| CAA65600.1 | X96856 | Prunus persica | CAA74328.1 | Y14005 | Malus x domestica |
| AAC95009.1 | AF074923 | Fragaria x ananassa | CAA64799.1 | X95553 | Cucumis melo |
| CAB43937.1 | AJ006348 | Fragaria x ananassa | AAB70884.1 | U67861 | Pelargonium x hortorum |
| AAA69909.1 | U13055 | Lycopersicon esculentum | BAA76387.1 | D67038 | Pyrus pyrifolia |
| AAA96135.1 | L41046 | Pisum sativum | AAB94031.1 | AF015787 | Malus x domestica |
| CAA65827.1 | X97189 | Capsicum annuum | AAC48977.1 | U07953 | Pelargonium x hortorum |
| | | | AAC67233.1 | AF033582 | Cucumis sativus |
| | | | AAC48922.1 | U06047 | Vigna radiata |

| Accession | Species | SEQ ID NO. | Accession | Species | SEQ ID NO. |
|-----------------|-------------------------|------------|-----------------|-------------------------|------------|
| AA33273.1 | Dianthus caryophyllus | L35152 | AA33554.1 | Oryza sativa | AP000399 |
| CAA41212.1 | Lycopersicon esculentum | X58273 | CAA53192.1 | Chlorella kessleri | X75440 |
| BAA34924.1 | Lycopersicon esculentum | AB013101 | CAA68113.1 | Chlorella kessleri | Y07520 |
| AAF65472.1 | Brassica juncea | AF252628 | CAA39036.1 | Chlorella kessleri | X55349 |
| BAB32502.1 | Phyllostachys edulis | AB044747 | BAB19862.1 | Oryza sativa | AB052883 |
| CAA71140.1 | Rumex palustris | Y10034 | CAB52688.1 | Lycopersicon esculentum | AJ132223 |
| CAA68538.1 | Lycopersicon esculentum | Y00478 | AAD55054.1 | Beta vulgaris | AF173655 |
| ABAB71421.1 | Helianthus annuus | L29405 | CAB52690.1 | Lycopersicon esculentum | AJ132225 |
| AAC98808.1 | Carica papaya | U68215 | AAG43998.1 | Zea mays | AF215837 |
| CAA58232.1 | Nicotiana tabacum | X83229 | AAF74568.1 | Solanum tuberosum | AF215854 |
| CAAB6468.1 | Nicotiana tabacum | Z46349 | AAF74567.1 | Nicotiana tabacum | AF215853 |
| AAA99793.1 | Nicotiana glutinosa | U54566 | AAF74566.1 | Spinacia oleracea | AF215852 |
| AAA33697.1 | Petunia x hybrida | L21978 | AAF74565.1 | Phaseolus vulgaris | AF215851 |
| AAF64528.1 | Carica papaya | AF254125 | AAD37424.1 | Betula pendula | AF149282 |
| AAA33644.1 | Pisum sativum | M98357 | AAD45934.1 | | AF168773 |
| AAA99792.1 | Nicotiana glutinosa | U54565 | | | |
| ABAB97368.1 | Rumex palustris | AF041479 | SEQ ID NO. 1368 | | |
| BAA33378.1 | Cucumis sativus | AB006807 | AAF20002.1 | Prunus dulcis | AF213936 |
| ABAB05171.1 | Nicotiana glutinosa | U62764 | AAD01600.1 | Lycopersicon esculentum | AF016713 |
| CAA59749.1 | Oryza sativa | X85747 | AAC32034.1 | Hordeum vulgare | AF023472 |
| BAA06526.1 | Cucumis melo | D31727 | AAF07875.1 | Oryza sativa | AF140606 |
| | | | CAC07206.1 | Brassica napus | AJ278966 |
| SEQ ID NO. 1359 | | | | | |
| BAA33810.1 | Nicotiana tabacum | AB018441 | AAF20002.1 | Glycine max | AB052788 |
| AAK15505.1 | Pennisetum ciliare | AF325723 | AAF07875.1 | Glycine max | AB052785 |
| | | | AAB69642.1 | Glycine max | AB052784 |
| SEQ ID NO. 1361 | | | CAC07206.1 | Lycopersicon esculentum | AF016713 |
| AAAB01567.1 | Picea glauca | L47672 | AAC32034.1 | Hordeum vulgare | AF023472 |
| | | | CAA93316.1 | Cucumis sativus | Z69370 |
| SEQ ID NO. 1365 | | | BAB19757.1 | Glycine max | AB052785 |
| CAB52689.1 | Lycopersicon esculentum | AJ132224 | BAB19756.1 | Glycine max | AB052784 |
| CAA09419.1 | Lycopersicon esculentum | AJ010942 | AAD16016.1 | Nepenthes alata | AF080545 |
| BAB19864.1 | Oryza sativa | AB052885 | AAD42860.1 | Prunus dulcis | AF154930 |
| CAA47324.1 | Nicotiana tabacum | X66856 | | | |
| AAB06594.1 | Medicago truncatula | U38651 | SEQ ID NO. 1370 | | |
| AAA79761.1 | Ricinus communis | L08196 | BAB19760.1 | Glycine max | AB052788 |
| CAA04511.1 | Vitis vinifera | AJ001061 | BAB19757.1 | Glycine max | AB052785 |
| CAA70777.1 | Vitis vinifera | Y09590 | BAB19756.1 | Glycine max | AB052784 |
| AAA79857.1 | Ricinus communis | L08188 | AAD01600.1 | Lycopersicon esculentum | AF016713 |
| CAB06079.1 | Picea abies | Z83829 | AAC32034.1 | Hordeum vulgare | AF023472 |
| BAB19863.1 | Oryza sativa | AB052884 | CAA93316.1 | Cucumis sativus | Z69370 |
| | | | AAF20002.1 | Prunus dulcis | AF213936 |
| | | | AAF07875.1 | Oryza sativa | AF140606 |
| | | | AAB69642.1 | Lotus japonicus | AF000392 |
| | | | CAC07206.1 | Brassica napus | AJ278966 |

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| AAD16016.1 | AF080545 | Nepenthes alata | AAC62396.1 | AF050756 | Ricinus communis |
| AAD42860.1 | AF154930 | Prunus dulcis | AAC35211.1 | U12637 | Hemerocallis hybrid cultiva |
| SEQ ID NO. 1371 | | | AAD10337.1 | U94591 | Hordeum vulgare |
| CAB55409.1 | AL117265 | Oryza sativa | AAD28477.1 | AF133839 | Sandersonia aurantiaca |
| AAC78593.1 | AF053995 | Lycopersicon esculentum | CAB09699.1 | Z97023 | Hordeum vulgare |
| AAC78596.1 | AF053998 | Lycopersicon esculentum | CAB09697.1 | Z97021 | Hordeum vulgare |
| AAC78591.1 | AF053993 | Lycopersicon esculentum | CAA56844.1 | X80876 | Oryza sativa |
| AAC78592.1 | AF053994 | Lycopersicon esculentum | BAA83472.1 | AB004648 | Oryza sativa |
| AAC78594.1 | AF053996 | Lycopersicon pimpinellifolium | AAB37233.1 | U34747 | Phalaenopsis sp. SM9108 |
| CAA05276.1 | AJ002236 | Lycopersicon pimpinellifolium | AAC49406.1 | U19267 | Zinnia elegans |
| AAD50430.1 | AF166121 | Lycopersicon pimpinellifolium | CAA06243.1 | AJ004958 | Pisum sativum |
| CAA05268.1 | AJ002235 | Hordeum vulgare | AAK27968.1 | AF242372 | Ipomoea batatas |
| CAA05274.1 | AJ002236 | Lycopersicon hirsutum | BAA83473.1 | AB004819 | Oryza sativa |
| AAA65235.1 | U15936 | Lycopersicon pimpinellifolium | BAA11170.1 | D76415 | Oryza sativa |
| AAC78595.1 | AF053997 | Lycopersicon esculentum | CAA84378.1 | Z34895 | Vicia sativa |
| CAA05279.1 | AJ002237 | Lycopersicon esculentum | SEQ ID NO. 1373 | | |
| SEQ ID NO. 1372 | | | AAC39318.1 | AF029858 | Sorghum bicolor |
| AAD48496.1 | AF172856 | Lycopersicon esculentum | BAB40323.1 | AB037244 | Asparagus officinalis |
| AAC49455.1 | U41902 | Pseudotsuga menziesii | AAA32913.1 | M32885 | Persea americana |
| CAB53515.1 | AJ245924 | Solanum tuberosum | BAB40324.1 | AB037245 | Asparagus officinalis |
| CAB17076.1 | Z99954 | Phaseolus vulgaris | AAA19701.1 | I24438 | Thlaspi arvense |
| BAA88898.1 | AB020961 | Zea mays | AAB94589.1 | AF022460 | Glycine max |
| CAA46863.1 | X66061 | Pisum sativum | AAB94588.1 | AF022459 | Glycine max |
| AAB88263.1 | AF019147 | Zea mays | CAA70575.1 | Y09423 | Nepeta racemosa |
| CAA05894.1 | AJ003137 | Lycopersicon esculentum | AAD47832.1 | AF166332 | Nicotiana tabacum |
| AA79915.1 | U17135 | Dianthus caryophyllus | AAB94584.1 | AF022157 | Glycine max |
| AAD28476.1 | AF133838 | Sandersonia aurantiaca | AAF27282.1 | AF122821 | Capsicum annuum |
| AAB88262.1 | AF019146 | Zea mays | CAA50312.1 | X70981 | Solanum melongena |
| CAA53377.1 | X75749 | Vicia sativa | CAB56503.1 | AJ238612 | Catharanthus roseus |
| CAB16317.1 | Z99173 | Nicotiana tabacum | CAA50645.1 | X71654 | Solanum melongena |
| CAB17074.1 | Z99952 | Phaseolus vulgaris | BAA03635.1 | D14990 | Solanum melongena |
| CAA12118.1 | AJ224766 | Phaseolus vulgaris | AAD44151.1 | AF124816 | Mentha x piperita |
| AAB68374.1 | U52970 | Phaseolus vulgaris | AAD44152.1 | AF124817 | Mentha x piperita |
| CAA57538.1 | X82011 | Cicer arietinum | CAA83941.1 | Z33875 | Mentha x piperita |
| AAB41816.1 | U44947 | Pisum sativum | AAD44150.1 | AF124815 | Mentha spicata |
| AAD54424.1 | AF182079 | Matricaria chamomilla | BAB40322.1 | AB036772 | Triticum aestivum |
| AAK06862.1 | AF343446 | Actinidia chinensis | CAC27827.1 | AJ295719 | Catharanthus roseus |
| CAA52425.1 | X74406 | Hemerocallis sp. | AAG44132.1 | AF218296 | Pisum sativum |
| AAB70820.2 | AF019145 | Zea mays | AAD56282.1 | AF155332 | Petunia x hybrida |
| | | | AAG14963.1 | AF214009 | Brassica napus |

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| CAC10270.1 | AJ243427 | Malus x domestica | CAA12118.1 | AJ224766 | Phaseolus vulgaris |
| AAB95118.1 | U71244 | Brassica rapa | CAB17074.1 | Z99952 | Phaseolus vulgaris |
| CAC09477.1 | AL442113 | Oryza sativa | AAD48496.1 | AF172856 | Lycopersicon esculentum |
| CAB62167.1 | AJ242828 | Castanea sativa | AAD53012.1 | AF089849 | Brassica napus |
| AAF06346.1 | AF195653 | Vitis vinifera | CAA05894.1 | AJ003137 | Lycopersicon esculentum |
| AAB02259.1 | U57787 | Avena sativa | BAA08245.1 | D45403 | Zea mays |
| AAD55090.1 | AF178653 | Vitis riparia | BAA88898.1 | AB020961 | Zea mays |
| CAA10492.1 | AJ131731 | Pseudotsuga menziesii | CAB16317.1 | Z99173 | Nicotiana tabacum |
| CAA09228.1 | AJ010501 | Cicer arietinum | AAB88263.1 | AF019147 | Zea mays |
| BAA95165.1 | AB029918 | Nicotiana tabacum | CAA92583.1 | Z68291 | Pisum sativum |
| AAF82264.1 | AF227324 | Vitis vinifera | CAA68192.1 | X99936 | Zea mays |
| AAB53368.1 | U77657 | Oryza sativa | AAC35211.1 | U12637 | Hemerocallis hybrid cultiv |
| AAB61590.1 | AF003007 | Vitis vinifera | AAB97142.1 | U93166 | Prunus armeniaca |
| AAB53367.1 | U77656 | Oryza sativa | | | |
| SEQ ID NO. 1386 | | | SEQ ID NO. 1387 | | |
| AAF61440.1 | AF138264 | Ipomoea batatas | AAA33967.1 | M76981 | Glycine max |
| AAF61442.1 | AF138266 | Ipomoea batatas | BAA23563.1 | D50094 | Phaseolus vulgaris |
| AAF61441.1 | AF138265 | Ipomoea batatas | BAA19152.1 | AB000585 | Phaseolus vulgaris |
| AAK27969.1 | AF242373 | Ipomoea batatas | AAA34020.1 | M20037 | Glycine max |
| CAB17075.1 | Z99953 | Phaseolus vulgaris | AAA34022.1 | M76980 | Glycine max |
| AAB67878.1 | U59465 | Vicia faba | AAA34021.1 | M20038 | Glycine max |
| CAA08906.1 | AJ009878 | Cicer arietinum | | | |
| CAA82995.1 | Z30338 | Vicia sativa | SEQ ID NO. 1390 | | |
| BAA92495.1 | AB038598 | Vigna mungo | BAA87043.1 | AB035183 | Ipomoea batatas |
| AAD29084.1 | AF082181 | Solanum melongena | CAB06427.1 | Z84383 | Dianthus caryophyllus |
| CAA78403.1 | Z14028 | Lycopersicon esculentum | CAB06429.1 | Z84385 | Dianthus caryophyllus |
| BAA08244.1 | D45402 | Zea mays | CAB06430.1 | Z84386 | Dianthus caryophyllus |
| CAA83673.1 | Z32795 | Glycine max | CAB11466.1 | Z98758 | Dianthus caryophyllus |
| CAB17077.1 | Z99955 | Phaseolus vulgaris | CAB06538.1 | Z84571 | Dianthus caryophyllus |
| CAB16316.1 | Z99172 | Vicia sativa | CAB06428.1 | Z84384 | Dianthus caryophyllus |
| CAB53397.1 | AJ245868 | Medicago sativa | | | |
| AAB62937.1 | AF007215 | Lavatera thuringiaca | SEQ ID NO. 1391 | | |
| BAA96501.1 | AB032168 | Nicotiana tabacum | AAK01360.1 | AF314811 | Brassica napus |
| CAA57675.1 | X82185 | Zea mays | CAB40834.1 | AJ005686 | Vitis vinifera |
| AAC49455.1 | U41902 | Pseudotsuga menziesii | AAC14481.1 | U92286 | Actinidia deliciosa |
| CAB17076.1 | Z99954 | Phaseolus vulgaris | AAB67875.1 | U60267 | Lycopersicon esculentum |
| AAD53011.1 | AF089848 | Brassica napus | CAA67069.1 | X98421 | Medicago sativa |
| CAA88629.1 | Z48736 | Lycopersicon esculentum | AAK01361.1 | AF314812 | Brassica napus |
| AAK27968.1 | AF242372 | Ipomoea batatas | BAA19916.1 | D49714 | Oryza sativa |
| AAB68374.1 | U52970 | Phaseolus vulgaris | AAC18862.1 | AF067967 | Mesembryanthemum crystallinum |
| | | | CAA67070.1 | X98422 | Medicago sativa |

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| AAC84137.1 | AF101424 | Cichorium intybus | SEQ ID NO. 1392 | SEQ ID NO. 1404 | Glycine max |
| AAB80946.1 | AF022914 | Triticum aestivum | | AAB71227.1 | Sesamum indicum |
| | | | | AAF13743.1 | Oryza sativa |
| SEQ ID NO. 1392 | | | | CAA61981.1 | |
| AAD10836.1 | US2079 | Solanum tuberosum | | | |
| | | | | SEQ ID NO. 1405 | |
| SEQ ID NO. 1400 | | | | AAD10327.1 | Fragaria x ananassa |
| BAA05648.1 | D26601 | Nicotiana tabacum | | AAK28509.1 | Fragaria x ananassa |
| AAF34436.1 | AF172282 | Oryza sativa | | AAB38503.1 | Mesembryanthemum crystalli |
| CAA08995.1 | AJ010091 | Brassica napus | | CAA48028.1 | Petroselinum crispum |
| CAA08997.1 | AJ010093 | Brassica napus | | AAC15467.1 | Apium graveolens |
| AAF19402.1 | AF203480 | Lycopersicon esculentum | | AAC61854.1 | Apium graveolens |
| AAF19403.1 | AF203481 | Lycopersicon esculentum | | AAC35846.1 | Medicago sativa |
| AAB70706.1 | U82087 | Tortula ruralis | | AAA74883.1 | Stylosanthes humilis |
| AAF19401.1 | AF203479 | Glycine max | | AAA74882.1 | Stylosanthes humilis |
| BAA85396.1 | AP000615 | Oryza sativa | | AAF72100.1 | Lycopersicon esculentum |
| AAC05270.1 | AF048691 | Oryza sativa | | CAA86072.1 | Pinus taeda |
| AAF06970.1 | AF162662 | Kalanchoe fedtschenkoi | | CAA05097.1 | Picea abies |
| AAF06969.1 | AF162661 | Kalanchoe fedtschenkoi | | CAA05096.1 | Picea abies |
| CAA57156.1 | X81393 | Oryza sativa | | CAA05095.1 | Picea abies |
| AAB80692.1 | U69173 | Glycine max | | CAA51226.1 | Picea abies |
| AAF21062.1 | AF216527 | Dunaliella tertiolecta | | AAB38774.1 | Pinus radiata |
| BAA96628.1 | AF002482 | Oryza sativa | | AAC31166.1 | Pinus taeda |
| AAG53979.1 | AF325168 | Nicotiana tabacum | | CAA86073.1 | Brassica napus |
| BAA81750.1 | AB017516 | Marchantia polymorpha | | AAK00679.1 | Brassica napus |
| BAA81748.1 | AB017515 | Marchantia polymorpha | | AAK00681.1 | Nicotiana tabacum |
| CAA89202.1 | Z49233 | Chlamydomonas eugametos | | CAA44216.1 | Nicotiana tabacum |
| AAA33443.1 | L15390 | Zea mays | | CAA44217.1 | Brassica oleracea |
| BAA81749.1 | AB017515 | Marchantia polymorpha | | AAC00682.1 | Eucalyptus globulus |
| BAA81751.1 | AB017517 | Marchantia polymorpha | | AAK07987.1 | Aralia cordata |
| AAC49405.1 | U08140 | Vigna radiata | | BAA03099.1 | Eucalyptus gunnii |
| AAD00239.1 | U73938 | Nicotiana tabacum | | CAA46585.1 | Brassica napus |
| AAD00240.1 | U73939 | Nicotiana tabacum | | AAK00678.1 | Eucalyptus saligna |
| AAD17800.1 | AF090835 | Mesembryanthemum crystallinum | | AAG15553.1 | Populus tremuloides |
| AAB49984.1 | U90262 | Cucurbita pepo | | AAF43140.1 | Populus balsamifera subsp. |
| AAF05112.1 | AF158091 | Mesembryanthemum crystallinum | | CAC07423.1 | |
| AAF27340.1 | AF186020 | Vicia faba | | trichocarpa | |
| CAA65244.1 | X95997 | Solanum tuberosum | | CAA79622.1 | Populus deltoides |
| CAA39936.1 | X56599 | Daucus carota | | AAK00684.1 | Brassica rapa |
| CAA07481.1 | AJ007366 | Zea mays | | AAB70908.1 | Lolium perenne |
| AAA69507.1 | U28376 | Zea mays | | | |

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| CAA53211.1 | X75480 | Eucalyptus gunnii | CAA61589.1 | X89409 | Lotus japonicus |
| AAK00680.1 | AF229408 | Brassica napus | CAA67889.1 | X99552 | Asparagus officinalis |
| CAA74070.1 | Y13733 | Zea mays | AAF74755.1 | AF263432 | Helianthus annuus |
| AAK00683.1 | AF229411 | Brassica rapa | AAD05035.1 | AF014057 | Triphysaria versicolor |
| CAA79625.1 | Z19573 | Medicago sativa | AAD05034.1 | AF014056 | Triphysaria versicolor |
| AAC35845.1 | AF083332 | Medicago sativa | AAD05033.1 | AF014055 | Triphysaria versicolor |
| CAA06687.1 | AJ005702 | Zea mays | CAA96526.1 | Z72354 | Vicia faba |
| CAA13177.1 | AJ231135 | Saccharum officinarum | CAA48141.1 | X67958 | Asparagus officinalis |
| BAA19487.1 | D86590 | Zinnia elegans | CAA61590.1 | X89410 | Lotus japonicus |
| BAA04046.1 | D16624 | Eucalyptus botryoides | CAA36429.1 | X52179 | Pisum sativum |
| AAD18000.1 | AF109157 | Eucalyptus globulus | BAA96252.1 | AB035248 | Astragalus sinicus |
| AAF23409.1 | AF207552 | Brassica napus | CAA36430.1 | X52180 | Pisum sativum |
| AAF23411.1 | AF207554 | Brassica oleracea | BAA96251.1 | AB035247 | Astragalus sinicus |
| AAF23412.1 | AF207555 | Brassica rapa | CAB57292.1 | AJ133522 | Phaseolus vulgaris |
| AAF23410.1 | AF207553 | Brassica napus | AAC49614.1 | U77679 | Glycine max |
| AAF23416.1 | AF207559 | Brassica rapa | BAA18951.1 | D83378 | Oryza sativa |
| AAF23415.1 | AF207558 | Brassica oleracea | AAAB03991.1 | U55873 | Oryza sativa |
| SEQ ID NO. 1412 | | | AAF02776.1 | AF190729 | Helianthus annuus |
| AAK14395.1 | AF339732 | Dianthus caryophyllus | AAAB71532.1 | AF005724 | Sandersonia aurantiaca |
| BAB20580.1 | AB042267 | Zea mays | CAA58052.1 | X82849 | Zea mays |
| BAB20581.1 | AB042268 | Zea mays | AAAB91481.1 | AF037363 | Helianthus annuus |
| BAB20579.1 | AB042261 | Zea mays | CAA73762.1 | Y13321 | Pisum sativum |
| BAB17300.1 | AB042260 | Zea mays | CAA73763.1 | Y13322 | Pisum sativum |
| BAA82873.1 | AB024291 | Zea mays | BAA96452.1 | AB021793 | Pyrus pyrifolia |
| BAA85113.1 | AB031012 | Zea mays | AAAB73943.1 | L23833 | Glycine max |
| BAA75253.1 | AB004882 | Zea mays | SEQ ID NO. 1415 | | |
| BAA85112.1 | AB031011 | Zea mays | AAG21985.1 | AF271636 | Zea mays |
| BAB20582.1 | AB042269 | Zea mays | AAC18622.2 | AF003551 | Zea mays |
| BAB41137.1 | AB060130 | Zea mays | AAG28387.1 | AF191667 | Brassica oleracea |
| SEQ ID NO. 1414 | | | AAG28386.1 | AF191666 | Brassica napus |
| BAB17726.1 | AB050900 | Raphanus sativus | AAAB97685.1 | AF042184 | Brassica napus |
| CAA59138.1 | X84448 | Brassica oleracea | AAG14462.1 | AF293461 | Brassica napus |
| AAC16325.1 | AF061740 | Elaeagnus umbellata | SEQ ID NO. 1417 | | |
| CAA08913.1 | AJ009952 | Phaseolus vulgaris | AAAB03379.1 | U27108 | Brassica napus |
| AAF02775.1 | AF190728 | Helianthus annuus | AAAB03378.1 | U27107 | Brassica napus |
| AAC49613.1 | U77678 | Glycine max | AAD42937.1 | AF084971 | Catharanthus roseus |
| AAAB1011.1 | U89923 | Medicago sativa | AAC49474.1 | U41817 | Phaseolus vulgaris |
| AAC09952.1 | U55874 | Glycine max | CAA11499.1 | AJ223624 | Spinacia oleracea |
| AAAB48058.1 | L40327 | Medicago sativa | CAA88492.1 | Z48602 | Nicotiana tabacum |

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| AA049398.1 | U46217 | Petroselinum crispum | AAA32990.1 | M87514 | Brassica oleracea |
| CAA76555.1 | Y16953 | Sinapis alba | CAA50575.1 | X71441 | Nicotiana tabacum |
| CAA88493.1 | Z48603 | Nicotiana tabacum | CAA53366.1 | X75670 | Oryza sativa |
| CAA63073.1 | X92102 | Raphanus sativus | CAA04702.1 | AJ001369 | Olea europaea |
| CAA58772.1 | X83920 | Brassica napus | AAA62621.1 | L22209 | Cuscuta reflexa |
| AAB00098.1 | L01449 | Glycine max | AAC49701.1 | U79011 | Borago officinalis |
| AAA80169.1 | U10270 | Zea mays | CAA56318.1 | X80008 | Nicotiana tabacum |
| AAB40291.1 | U42208 | Oryza sativa | CAA48240.1 | X68140 | Nicotiana tabacum |
| AAC49556.1 | U04295 | Oryza sativa | AAD10774.1 | AF098510 | Petunia x hybrida |
| CAA58774.1 | X83922 | Brassica napus | AAF60299.1 | AF233640 | Petunia x hybrida |
| AAD42938.1 | AF084972 | Catharanthus roseus | CAA11033.1 | AJ222981 | Physcomitrella patens |
| AAB36514.1 | U57389 | Phaseolus vulgaris | SEQ ID NO. 1433 | | |
| CAC00656.1 | AJ292743 | Petroselinum crispum | BAA19675.1 | D49486 | Solidago canadensis |
| CAA71768.1 | Y10809 | Petroselinum crispum | CAA39819.1 | X56435 | Pisum sativum |
| CAA71770.1 | Y10810 | Petroselinum crispum | AAA33688.1 | J04087 | Pisum sativum |
| BAA02304.1 | D12920 | Triticum aestivum | BAA01088.1 | D10244 | Spinacia oleracea |
| CAA40101.1 | X56781 | Triticum aestivum | CAA32200.1 | X14041 | Lycopersicon esculentum |
| BAA07289.1 | D38111 | Triticum aestivum | AAA34195.1 | M37151 | Lycopersicon esculentum |
| AAA34293.1 | M28704 | Triticum aestivum | BAB21760.1 | AB026724 | Oryza sativa |
| AAK14790.1 | AY027510 | Catharanthus roseus | BAA12745.1 | D85239 | Oryza sativa |
| CAA58773.1 | X83921 | Brassica napus | AAA33728.1 | M20792 | Petunia x hybrida |
| CAA52897.1 | X74943 | Lycopersicon esculentum | AAB67990.1 | U69536 | Chloroplast Triticum aestivum |
| CAB62402.1 | Y15165 | Zea mays | AAB67991.1 | U69632 | Triticum aestivum |
| BAA10928.1 | D64051 | Triticum aestivum | AAC08582.1 | AF054151 | Zantedeschia aethiopica |
| CAA52896.1 | X74942 | Lycopersicon esculentum | CAA41455.1 | X58579 | Pinus sylvestris |
| AAA17488.1 | U07933 | Triticum aestivum | BAA24919.1 | AB004870 | Marchantia palcacea |
| CAA66477.1 | X97903 | Vicia faba | AAA33659.1 | M63003 | Pisum sativum |
| CAA52895.1 | X74941 | Lycopersicon esculentum | AAC25568.1 | AF071112 | Brassica rapa subsp. pekinensis |
| BAA02303.2 | D12919 | Triticum aestivum | AAB87572.1 | AF034630 | Panax ginseng |
| AAA68429.1 | M63999 | Triticum aestivum | CAA10160.1 | AJ012739 | Cicer arietinum |
| CAA67298.1 | X98747 | Hordeum vulgare | CAA10132.1 | AJ012691 | Cicer arietinum |
| AAA19103.1 | U10466 | Triticum aestivum | CAB57992.1 | X17565 | Zea mays |
| BAA36492.1 | AB021736 | Oryza sativa | CAA41454.1 | X58578 | Pinus sylvestris |
| BAA11431.1 | D78609 | Oryza sativa | AAB40394.1 | U80069 | Mesembryanthemum crystallinum |
| SEQ ID NO. 1425 | | | CAA60826.1 | X87372 | Lycopersicon esculentum |
| CAA73333.1 | Y12805 | Nicotiana tabacum | AAB92612.1 | AF037359 | Paulownia kawakamii |
| CAA09420.1 | AJ010943 | Lycopersicon esculentum | AAA33917.1 | L36320 | Oryza sativa |
| SEQ ID NO. 1428 | | | CAA73929.1 | Y13610 | Carica papaya |
| CAA04703.1 | AJ001370 | Olea europaea | CAA37866.1 | X53872 | Spinacia oleracea |
| | | | AAC14464.1 | L19435 | Oryza sativa |

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|-----------------|----------|-------------------------------|-----------------|----------|-------------------------------|
| BAA00799.1 | D00999 | Oryza sativa | CAA60507.1 | X86924 | Vitis vinifera |
| AAK06837.1 | AF328859 | Avicennia marina | BAA08445.1 | D49475 | Zea mays |
| AAD01605.1 | AF016893 | Populus tremuloides | AAB51596.1 | U93561 | Zea mays |
| AAD05576.1 | AF009735 | Raphanus sativus | AAB51595.1 | U93560 | Zea mays |
| AAA33510.1 | M54936 | Zea mays | CAB94837.1 | AJ277950 | Nicotiana plumbaginifolia |
| CRAA65043.1 | X95728 | Brassica juncea | CAA09478.1 | AJ011096 | Asparagus officinalis |
| AAC14465.1 | L19434 | Oryza sativa | CAB9601.2 | Y08293 | Nicotiana plumbaginifolia |
| BAA00800.1 | D01000 | Oryza sativa | AAB39508.1 | U48695 | Lycopersicon esculentum |
| CAB60191.1 | AJ250667 | Ananas comosus | CAA09456.1 | AJ011006 | Asparagus officinalis |
| CAB39444.1 | X55974 | Nicotiana plumbaginifolia | CAA41635.1 | X58831 | Chlorella sorokiniana |
| AAD48484.1 | AF170297 | Manihot esculenta | CAA41636.1 | X58832 | Chlorella sorokiniana |
| AAC08581.1 | AF054150 | Zantedeschia aethiopica | SEQ ID NO. 1438 | | |
| AAA34194.1 | M37150 | Lycopersicon esculentum | AAD26332.1 | AF120148 | Triticum aestivum |
| CAA32199.1 | X14040 | Lycopersicon esculentum | AAD26331.1 | AF120147 | Triticum aestivum |
| AAD01604.1 | AF016892 | Populus tremuloides | AAD26330.1 | AF120146 | Triticum aestivum |
| AAB49913.1 | U34727 | Zea mays | AAB06756.2 | U66307 | Brassica napus |
| SEQ ID NO. 1434 | | | AAA91164.1 | U38920 | Phaseolus vulgaris |
| AAC36697.1 | AF075579 | Mesembryanthemum crystallinum | AAG01148.1 | AF284065 | Sesamum indicum |
| CAC10358.1 | AJ277086 | Nicotiana tabacum | BAA84084.1 | AB032073 | Nicotiana paniculata |
| AAF19804.1 | AF180355 | Brassica oleracea | BAA95788.1 | AB009881 | Nicotiana tabacum |
| AAD17804.1 | AF092431 | Lotus japonicus | AAB03687.1 | U32511 | Mesembryanthemum crystallinum |
| CAC10359.1 | AJ277087 | Nicotiana tabacum | AAG40328.1 | AF323175 | Zea mays |
| CAC09575.1 | AJ298987 | Fagus sylvatica | AAC15756.1 | AF056326 | Zea mays |
| CRAA72341.1 | Y11607 | Medicago sativa | AAK21969.1 | AY028259 | Avicennia marina |
| AAC36698.1 | AF075580 | Mesembryanthemum crystallinum | CAA7751.1 | Z11693 | Spirodela polyrrhiza |
| AAAD17805.1 | AF092432 | Lotus japonicus | BAB40956.1 | AB059557 | Avena sativa |
| AAG43835.1 | AF213455 | Zea mays | AAC17133.1 | AF056325 | Hordeum vulgare |
| AAD11430.1 | AF097667 | Mesembryanthemum crystallinum | BAA25729.1 | AB012107 | Oryza sativa |
| AAC36699.1 | AF075581 | Mesembryanthemum crystallinum | AAF97409.1 | AY005128 | Actinidia arguta |
| AAC36700.1 | AF075582 | Mesembryanthemum crystallinum | AAG14461.1 | AF293460 | Lycopersicon esculentum |
| AAC35951.1 | AF079355 | Mesembryanthemum crystallinum | AAK26439.1 | AF357837 | Solanum tuberosum |
| CAB90634.1 | AJ277744 | Fagus sylvatica | SEQ ID NO. 1439 | | |
| AAB93832.1 | U81960 | Zea mays | BAB21545.1 | AB042950 | Nicotiana tabacum |
| AAC26828.1 | AF075603 | Oryza sativa | AAK01938.1 | AY026321 | Lupinus albus |
| CAC09576.1 | AJ298988 | Fagus sylvatica | BAA20522.1 | AB004809 | Catharanthus roseus |
| SEQ ID NO. 1435 | | | AAF74025.1 | AF156696 | Nicotiana tabacum |
| CRAA69600.1 | Y08292 | Nicotiana plumbaginifolia | BAB21562.1 | AB042951 | Nicotiana tabacum |
| CAB94836.1 | AJ277949 | Nicotiana plumbaginifolia | BAB21563.1 | AB042956 | Nicotiana tabacum |
| CAC18730.1 | AJ303070 | Vitis vinifera | CAA67396.1 | X98891 | Solanum tuberosum |

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|-----------------|----------|-----------------------------|-----------------|----------|---------------------------|
| CAC28218.1 | AJ286743 | Sesbania rostrata | CAA42529.2 | X59872 | Triticum aestivum |
| CAC28219.1 | AJ286744 | Sesbania rostrata | AAK29456.1 | AF352253 | Lens culinaris |
| AA81346.1 | AF000354 | Medicago truncatula | AA41006.1 | AF107023 | Triticum aestivum |
| AA81347.1 | AF000355 | Medicago truncatula | AA74723.1 | L07946 | Vulvox carteri |
| AA38859.1 | AF156695 | Solanum tuberosum | CAA12232.1 | AJ224933 | Lycopersicon esculentum |
| CAA67395.1 | X98890 | Solanum tuberosum | AAK29455.1 | AF352252 | Lens culinaris |
| AA82146.1 | AF022873 | Lycopersicon esculentum | AA41009.1 | AF107027 | Triticum aestivum |
| AA82147.1 | AF022874 | Lycopersicon esculentum | AAA50578.1 | U03391 | Lycopersicon esculentum |
| CAA74607.1 | Y14214 | Lycopersicon esculentum | AA41651.1 | L29456 | Nicotiana tabacum |
| AA42956.2 | AF239619 | Oryza sativa | AAA50303.1 | L34578 | Pisum sativum |
| AA26146.1 | AF110180 | Triticum aestivum | AA98452.1 | U16726 | Chlamydomonas reinhardtii |
| AA76345.1 | AF271893 | Oryza sativa | CAA29123.1 | X05636 | Pisum sativum |
| AAK06857.1 | AF337531 | Oryza rufipogon | AAF27930.1 | AF222804 | Euphorbia esula |
| AAK25766.1 | AF335588 | Oryza sativa | CAA07233.1 | AJ006767 | Cicer arietinum |
| AA40188.1 | AF229169 | Oryza sativa | BAA87331.1 | AB012694 | Lilium longiflorum |
| AAG43998.1 | AF215837 | Apium graveolens var. dulce | BAA88671.1 | AB029614 | Nicotiana tabacum |
| CAA68813.1 | Y07520 | Chlorella kessleri | CAA73171.1 | Y12599 | Apium graveolens |
| CAA39036.1 | X55349 | Chlorella kessleri | AA86857.1 | AF031547 | Fritillaria agrestis |
| CAA53192.1 | X75440 | Chlorella kessleri | | | |
| SEQ ID NO. 1440 | | | SEQ ID NO. 1444 | | |
| AAC49815.1 | U87257 | Daucus carota | AA62181.1 | U95953 | Zea mays |
| CAA04245.1 | AJ000693 | Hordeum vulgare | AAK00632.1 | AF224672 | Persea americana |
| | | | BAB11932.1 | AB030293 | Vigna unguiculata |
| | | | AAF26356.1 | AF190462 | Phaseolus vulgaris |
| SEQ ID NO. 1441 | | | SEQ ID NO. 1445 | | |
| AAF64525.1 | AF253416 | Lycopersicon chilense | BAA81762.1 | AP000364 | Oryza sativa |
| CAA77867.1 | Z11842 | Lycopersicon esculentum | | | |
| AB03076.1 | U01890 | Lycopersicon pennellii | | | |
| AA41007.1 | AF107024 | Triticum aestivum | SEQ ID NO. 1446 | | |
| AAK29452.1 | AF352249 | Lathyrus sativus | BAA21922.1 | AB006600 | Petunia x hybrida |
| AAK29453.1 | AF352250 | Lathyrus sativus | BAA21923.1 | AB006601 | Petunia x hybrida |
| AA34246.1 | L07947 | Vulvox carteri | BAA21921.1 | AB006599 | Petunia x hybrida |
| BAA25203.1 | D87064 | Triticum aestivum | BAA19110.1 | AB000451 | Petunia x hybrida |
| AAK29450.1 | AF352247 | Pisum sativum | BAA21925.1 | AB006603 | Petunia x hybrida |
| AAK29451.1 | AF352248 | Pisum sativum | BAA21926.1 | AB006604 | Petunia x hybrida |
| CAA40362.1 | X57077 | Zea mays | BAA21924.1 | AB006602 | Petunia x hybrida |
| AAK29449.1 | AF352246 | Pisum sativum | BAA19111.1 | AB000452 | Petunia x hybrida |
| AA41008.1 | AF107026 | Triticum aestivum | BAA05077.1 | D26084 | Petunia x hybrida |
| BAA25204.1 | D87065 | Triticum aestivum | AAD26942.1 | AF119050 | Datisca glomerata |
| AAK29454.1 | AF352251 | Lens culinaris | BAA05076.1 | D26083 | Petunia x hybrida |
| AA41005.1 | AF107022 | Triticum aestivum | AAC06243.1 | AF053077 | Nicotiana tabacum |

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| BAA21927.1 | AB006605 | Petunia x hybrida | CAA66037.1 | X97351 | Populus balsamifera subsp |
| BAA96071.1 | AB035133 | Petunia x hybrida | trichocarpa | | |
| BAA21920.1 | AB006598 | Petunia x hybrida | BAA07241.1 | D38051 | Populus kitakamiensis |
| AAB53261.1 | U76555 | Brassica rapa | AAB47602.1 | L07554 | Linum usitatissimum |
| AAB53260.1 | U76554 | Brassica rapa | BAA06334.1 | D30652 | Populus kitakamiensis |
| AAK01713.1 | AF332876 | Oryza sativa | AAC98519.1 | AF007211 | Glycine max |
| BAA05079.1 | D26086 | Petunia x hybrida | AAB97734.1 | AF014502 | Glycine max |
| BAA96070.1 | AB035132 | Petunia x hybrida | BAA06335.1 | D30653 | Populus kitakamiensis |
| BAA21919.1 | AB006597 | Petunia x hybrida | AAD37427.1 | AF149277 | Phaseolus vulgaris |
| BAA05078.1 | D26085 | Petunia x hybrida | CAA62226.1 | X90693 | Medicago sativa |
| BAA19112.1 | AB000453 | Petunia x hybrida | CAA62227.1 | X90694 | Medicago sativa |
| BAA19114.1 | AB000455 | Petunia x hybrida | AAB41811.1 | L36157 | Medicago sativa |
| BAA21928.1 | AB006606 | Petunia x hybrida | CAA62225.1 | X90692 | Medicago sativa |
| BAA19926.1 | AB000456 | Petunia x hybrida | AAB41810.1 | L36156 | Medicago sativa |
| SEQ ID NO. 1453 | | | AAD37430.1 | AF149280 | Phaseolus vulgaris |
| AAF75791.1 | AF271892 | Pisum sativum | CAB94692.1 | AJ242742 | Ipomoea batatas |
| BAA03763.1 | D16247 | Nicotiana sylvestris | AAA34108.1 | J02979 | Nicotiana tabacum |
| AAF40306.1 | AF156667 | Vigna radiata | CAA40796.1 | X57564 | Armoracia rusticana |
| CAA68193.1 | X99837 | Spinacia oleracea | BAA01877.1 | D11102 | Populus kitakamiensis |
| AAD20980.1 | AF079782 | Zea mays | BAA01992.1 | D11396 | Nicotiana tabacum |
| SEQ ID NO. 1454 | | | CAB67121.1 | Y19023 | Lycopersicon esculentum |
| BAA92155.1 | AB007818 | Citrus unshiu | CAA50597.1 | X71593 | Lycopersicon esculentum |
| AAF28386.1 | AF151215 | Nicotiana glauca | AAD43561.1 | AF155124 | Gossypium hirsutum |
| CAA22230.1 | X14067 | Chenopodium rubrum | BAA92500.1 | AP001383 | Oryza sativa |
| AAB84194.1 | AF029243 | Pisum sativum | AAF63027.1 | AF244924 | Spinacia oleracea |
| BAB16425.1 | AB041513 | Nicotiana tabacum | AAB02554.1 | L37790 | Stylosanthes humilis |
| AAB02879.1 | M37152 | Nicotiana tabacum | AAB06183.1 | M37636 | Arachis hypogaea |
| SEQ ID NO. 1457 | | | CAA59487.1 | X85230 | Triticum aestivum |
| BAA14143.1 | D90115 | Armoracia rusticana | BAA94962.1 | AB042103 | Asparagus officinalis |
| BAA14144.1 | D90116 | Armoracia rusticana | AAF63026.1 | AF244923 | Spinacia oleracea |
| BAA11853.1 | D83225 | Populus nigra | CAB99487.1 | AJ276227 | Hordeum vulgare |
| CAA66035.1 | X97349 | Populus balsamifera subsp. | CAA71492.1 | Y10466 | Spinacia oleracea |
| trichocarpa | | | CAB65334.1 | AJ250121 | Picea abies |
| CAA66036.1 | X97350 | Populus balsamifera subsp. | AAA33121.1 | M32742 | Cucumis sativus |
| trichocarpa | | | CAA39486.1 | X56011 | Triticum aestivum |
| BAA11852.1 | D83224 | Populus nigra | BAA92422.1 | AP001366 | Oryza sativa |
| CAA66034.1 | X97348 | Populus balsamifera subsp. | BAA92497.1 | AP001383 | Oryza sativa |
| trichocarpa | | | CAA59485.1 | X85228 | Triticum aestivum |
| | | | CAA76680.1 | Y17192 | Cucurbita pepo |

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| AAA32676.1 | M37637 | Arachis hypogaea | CAA66036.1 | X97350 | Populus balsamifera subsp |
| CAA64413.1 | X94943 | Lycopersicon esculentum | trichocarpa | | |
| BAA82307.1 | AB027753 | Nicotiana tabacum | BAA14143.1 | D90115 | Armoracia rusticana |
| AAB67737.1 | L77080 | Stylosanthes humilis | AAD37427.1 | AF149277 | Phaseolus vulgaris |
| AAD37429.2 | AF149279 | Phaseolus vulgaris | CAA59485.1 | X85228 | Triticum aestivum |
| CAA71494.1 | Y10468 | Spinacia oleracea | CAB65334.1 | AJ250121 | Picea abies |
| AAD37375.1 | AF145349 | Glycine max | AAB47602.1 | L07554 | Linum usitatissimum |
| BAA03644.1 | D14997 | Oryza sativa | AAB41811.1 | L36157 | Medicago sativa |
| AAD11482.1 | U51192 | Glycine max | AAC49820.1 | AF014469 | Oryza sativa |
| AAD11481.1 | U51191 | Glycine max | | | |
| BAA07663.1 | D42064 | Nicotiana tabacum | SEQ ID NO. 1459 | | |
| AAA65637.1 | L13654 | Lycopersicon esculentum | BAA11394.1 | D78498 | Brassica rapa |
| BAA94962.1 | AB042103 | Asparagus officinalis | BAA11388.1 | D78491 | Brassica rapa |
| AAA65636.1 | L13653 | Lycopersicon esculentum | CAA71803.1 | Y10850 | Brassica juncea |
| CAA80502.1 | Z22920 | Spirodela polyrrhiza | AAA74958.1 | L31940 | Brassica rapa |
| AAF63024.1 | AF244921 | Spinacia oleracea | BAA11391.1 | D78494 | Brassica rapa |
| BAA07664.1 | D42065 | Nicotiana tabacum | AAF70556.1 | AF200712 | Brassica oleracea |
| BAA11853.1 | D83225 | Populus nigra | CAA71805.1 | Y10852 | Brassica juncea |
| BAA92500.1 | AP001383 | Oryza sativa | CAA71802.1 | Y10849 | Brassica juncea |
| CAA66034.1 | X97348 | Populus balsamifera subsp. | CAA71806.1 | Y10853 | Brassica juncea |
| trichocarpa | | | CAA71804.1 | Y10851 | Brassica juncea |
| CAA76374.2 | Y16776 | Spinacia oleracea | AAC27531.1 | AF078912 | Mesembryanthemum crystallinum |
| AAF63027.1 | AF244924 | Spinacia oleracea | AAB61212.1 | AF000935 | Mesembryanthemum crystallinum |
| CAA40796.1 | X57564 | Armoracia rusticana | AAA19611.1 | U11423 | Coffea arabica |
| CAA62226.1 | X90693 | Medicago sativa | CAA65009.1 | X95709 | Cicer arietinum |
| CAA71489.1 | Y10463 | Spinacia oleracea | CAA92243.1 | Z68138 | Lycopersicon esculentum |
| AAF63025.1 | AF244923 | Spinacia oleracea | CAA10232.1 | AJ130886 | Fagus sylvatica |
| CAA50597.1 | X71593 | Lycopersicon esculentum | AAA53074.1 | L27813 | Actinidia deliciosa |
| CAB67121.1 | Y19023 | Lycopersicon esculentum | AAG50080.1 | AF333385 | Avicennia marina |
| CAA66035.1 | X97349 | Populus balsamifera subsp. | CAA54471.1 | X77254 | Vicia faba |
| trichocarpa | | | AAK28022.1 | AF279655 | Typha latifolia |
| BAA14144.1 | D90116 | Armoracia rusticana | CAC12823.1 | AJ299253 | Nicotiana tabacum |
| BAA07241.1 | D38051 | Populus kitakamiensis | CAB77242.1 | AJ133145 | Persea americana |
| CAA62615.1 | X91232 | Mercurialis annua | CAB53392.1 | AJ247196 | Eichhornia crassipes |
| CAC21393.1 | AJ401276 | Zea mays | CAB53390.1 | AJ247090 | Eichhornia crassipes |
| BAA06334.1 | D30652 | Populus kitakamiensis | AAK11269.1 | AF334141 | Avicennia marina |
| AAD43561.1 | AF155124 | Gossypium hirsutum | AAG61122.1 | AF329968 | Avicennia marina |
| AAC98519.1 | AF007211 | Glycine max | AAG44757.1 | AF268391 | Musa acuminata |
| CAA66037.1 | X97351 | Populus balsamifera subsp. | CAB53391.1 | AJ247195 | Eichhornia crassipes |
| trichocarpa | | | AAC49627.1 | U43530 | Oryza sativa |
| AAB97734.1 | AF014502 | Glycine max | BAA14038.1 | D89931 | Oryza sativa |

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| AAB70560.1 | AF017787 | Oenanthe javanica | AAF01694.1 | AF181456 | Hordeum vulgare |
| CAA92652.1 | Z68310 | Lycopersicon esculentum | AAD50291.1 | AF172263 | Prunus dulcis |
| AAC72984.1 | AF101825 | Silene vulgaris | CAA33364.1 | X15290 | Zea mays |
| AAB05223.1 | U46543 | Nicotiana glutinosa | CAA44789.1 | X63063 | Pisum sativum |
| CAB56620.1 | AJ243532 | Prunus persica | CAA44787.1 | X63061 | Pisum sativum |
| AAB88276.1 | U97494 | Prunus armeniaca | AAB51381.1 | U91970 | Pisum sativum |
| BAA96444.1 | AB021785 | Pyrus pyrifolia | AAF01695.1 | AF181457 | Hordeum vulgare |
| AAC62510.1 | AF093585 | Pimpinella brachycarpa | CAA44788.1 | X63062 | Pisum sativum |
| AAB04674.1 | L77963 | Lycopersicon esculentum | AAC49618.1 | U26423 | Lycopersicon esculentum |
| CAA92651.1 | Z68309 | Lycopersicon esculentum | AAB05927.1 | U63831 | Sorghum bicolor |
| BAA31561.1 | AB008100 | Citrus unshiu | CAA33362.1 | X15288 | Hordeum vulgare |
| | | | AAD02253.1 | AF043087 | Hordeum vulgare |
| | | | AAF01689.1 | AF181451 | Hordeum vulgare |
| | | | AAC05922.1 | AF031248 | Lophopyrum elongatum |
| SEQ ID NO. 1461 | | | AAB71225.1 | AF004807 | Glycine max |
| AAB53099.1 | U68217 | Brassica napus | CAA33360.1 | X15286 | Hordeum vulgare |
| AAA33959.1 | M64337 | Glycine max | CAA55194.1 | X78431 | Triticum turgidum subsp. durum |
| AAA34016.1 | M72894 | Glycine max | AAF60172.1 | AF236067 | Elaeis guineensis |
| CAA65771.1 | X97059 | Medicago sativa | CAA66970.1 | X98326 | Hordeum vulgare |
| AAB18928.1 | U31648 | Glycine max | CAA55192.1 | X78429 | Triticum turgidum subsp. durum |
| AAC06026.1 | AF052057 | Vigna unguiculata | AAD02255.1 | AF043089 | Hordeum vulgare |
| AAC06027.1 | AF052058 | Vigna unguiculata | AAF01691.1 | AF181453 | Hordeum vulgare |
| CAA41213.1 | X58274 | Phaseolus vulgaris | AAD02254.1 | AF043088 | Hordeum vulgare |
| AAD50644.1 | AF133814 | Solanum tuberosum | AAF01690.1 | AF181452 | Hordeum vulgare |
| CAA51786.1 | X73369 | Pisum sativum | CAA33363.1 | X15289 | Hordeum vulgare |
| CAA45763.1 | X64417 | Pisum sativum | CAA50499.1 | X71362 | Hordeum vulgare |
| CAA43663.1 | X61391 | Zea mays | AAB51380.1 | U91969 | Pisum sativum |
| CAA58146.1 | X83076 | Zea mays | | | |
| CAA58147.1 | X83077 | Zea mays | SEQ ID NO. 1463 | | |
| CAA43664.1 | X61392 | Zea mays | CAA64636.1 | X95343 | Nicotiana tabacum |
| AAA33958.1 | M58336 | Glycine max | | | |
| AAC15241.1 | AF028072 | Pinus taeda | SEQ ID NO. 1464 | | |
| CAA47982.1 | X67754 | Vigna unguiculata | CAA48706.1 | X68807 | Oryza sativa |
| CAA47984.1 | X67756 | Vigna unguiculata | | | |
| CAA47983.1 | X67755 | Vigna unguiculata | SEQ ID NO. 1465 | | |
| AAC12282.1 | AF052511 | Glycine max | AAC63057.1 | U70076 | Lycopersicon esculentum |
| AAC12281.1 | AF052513 | Glycine max | AAB23482.1 | S45035 | Glycine max |
| | | | BAA82254.1 | AB029441 | Glycine max |
| SEQ ID NO. 1462 | | | AAB23483.1 | S45035 | Glycine max |
| CAA09421.1 | AJ010944 | Helianthus annuus | CAA45778.1 | X64448 | Glycine max |
| CAA05713.1 | AJ002741 | Helianthus annuus | CAA56343.1 | X80039 | Glycine max |
| CAA63339.1 | X92647 | Helianthus annuus | | | |
| AAD02257.1 | AF043091 | Hordeum vulgare | | | |



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|-----------------|----------|-----------------------------|-----------------|----------|----------------------------|
| AAE23464.1 | S45092 | Glycine max | AAE27340.1 | AF186020 | Vicia faba |
| BAA03084.1 | D13974 | Psophocarpus tetragonolobus | CAA81443.1 | Z26846 | Mesembryanthemum crystalli |
| CAA45777.1 | X64447 | Glycine max | CAA82993.1 | Z30332 | Spinacia oleracea |
| AAC60535.1 | S96732 | Psophocarpus tetragonolobus | AAA34002.1 | M67449 | Glycine max |
| AAC60537.1 | S96735 | Psophocarpus tetragonolobus | BAA96628.1 | AP002482 | Oryza sativa |
| AAC60536.1 | S96733 | Psophocarpus tetragonolobus | BAA83689.1 | AB011968 | Oryza sativa |
| AAK20289.1 | AF314823 | Glycine max | SEQ ID NO. 1467 | | |
| CAA44005.1 | X62095 | Solanum tuberosum | AAG34803.1 | AF243368 | Glycine max |
| AAB68964.1 | U18995 | Brassica oleracea | AAF64450.1 | AF239928 | Euphorbia esula |
| AAB23733.1 | S46970 | Psophocarpus tetragonolobus | AAG34798.1 | AF243363 | Glycine max |
| BAA04151.1 | D17331 | Solanum tuberosum | AAG34796.1 | AF243361 | Glycine max |
| BAA04148.1 | D17328 | Solanum tuberosum | AAG34797.1 | AF243362 | Glycine max |
| AAI18564.1 | M96257 | Solanum tuberosum | AAG34809.1 | AF243374 | Glycine max |
| AAC49602.1 | U30814 | Solanum tuberosum | AAG34801.1 | AF243366 | Glycine max |
| CAA52919.1 | X74985 | Solanum tuberosum | AAG34807.1 | AF243372 | Glycine max |
| CAA39860.1 | X56509 | Theobroma cacao | AAG34804.1 | AF243369 | Glycine max |
| CAA45723.1 | X64370 | Solanum tuberosum | AAG34810.1 | AF243375 | Glycine max |
| SEQ ID NO. 1466 | | | AAG34802.1 | AF243367 | Glycine max |
| CRA04261.2 | AJ000728 | Lycopersicon esculentum | AAG34808.1 | AF243373 | Glycine max |
| AAF67262.1 | AF165186 | Nicotiana tabacum | AAG34836.1 | AF244693 | Zea mays |
| AAC83393.1 | U83625 | Zea mays | AAG34844.1 | AF244701 | Zea mays |
| CAC24705.1 | AJ302651 | Nicotiana tabacum | AAA68430.1 | J03679 | Solanum tuberosum |
| AAG40578.1 | AF216314 | Oryza sativa | AAC18566.1 | AF048978 | Glycine max |
| BAA06731.1 | D31964 | Nicotiana tabacum | AAG34805.1 | AF243370 | Glycine max |
| AAG53979.1 | AF325168 | Nicotiana tabacum | AAG34800.1 | AF243365 | Glycine max |
| BAA05648.1 | D26601 | Nicotiana tabacum | CAA09187.1 | AJ010448 | Alopecurus myosuroides |
| AAF34436.1 | AF172282 | Oryza sativa | CAA71784.1 | Y10820 | Glycine max |
| CAA08995.1 | AJ010091 | Brassica napus | AAG34831.1 | AF244688 | Zea mays |
| CAA65244.1 | X95997 | Solanum tuberosum | CAA09188.1 | AJ010449 | Alopecurus myosuroides |
| CAA08997.1 | AJ010093 | Brassica napus | AAG34837.1 | AF244694 | Zea mays |
| CAA57898.1 | X82548 | Hordeum vulgare | AAG34832.1 | AF244689 | Zea mays |
| CAA46556.1 | X65606 | Hordeum vulgare | AAG34829.1 | AF244686 | Zea mays |
| AAC99329.1 | AF062479 | Oryza sativa | AAG34833.1 | AF244690 | Zea mays |
| CAA71142.1 | Y10036 | Cucumis sativus | CAA04391.1 | AJ000923 | Carica papaya |
| CAA07813.1 | AJ007990 | Hordeum vulgare | AAF29773.1 | AF159229 | Gossypium hirsutum |
| BAA05649.1 | D26602 | Nicotiana tabacum | AAG34795.1 | AF243360 | Glycine max |
| AAF19401.1 | AF203479 | Glycine max | AAG34841.1 | AF244698 | Zea mays |
| AAD23582.1 | AF128443 | Glycine max | AAG34849.1 | AF244706 | Zea mays |
| CAA46554.1 | X65604 | Hordeum vulgare | AAG34838.1 | AF244695 | Zea mays |
| AAB05457.1 | U55768 | Oryza sativa | AAC32118.1 | AF051214 | Picea mariana |

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| AAF73236.1 | AAF153061 | Pisum sativum | CAB41490.1 | AJ238439 | Cicer arietinum |
| CAA57721.1 | X82270 | Medicago sativa | CAA10067.1 | AJ012581 | Cicer arietinum |
| BAA74734.1 | AB016802 | Zea mays | CAA04117.1 | AJ000478 | Helianthus tuberosus |
| CAA56314.1 | X79993 | Avena sativa | CAA04116.1 | AJ000477 | Helianthus tuberosus |
| AAC28850.1 | AF079318 | Triticum aestivum | AAG09208.1 | AF175278 | Pisum sativum |
| AAK01710.1 | AF332873 | Oryza sativa | AAC49188.2 | U29333 | Pisum sativum |
| AAG40579.1 | AF216315 | Oryza sativa | CAA65580.1 | X96784 | Nicotiana tabacum |
| CAC13967.1 | AJ250311 | Oryza sativa | BAA92894.1 | AB006790 | Petunia x hybrida |
| BAA74733.1 | AB016801 | Oryza sativa | AAG44132.1 | AF218296 | Pisum sativum |
| AAD28617.1 | AF129087 | Zea mays | CAA64635.1 | X95342 | Nicotiana tabacum |
| AAF23902.1 | AF194415 | Medicago sativa | AAD56282.1 | AF155332 | Petunia x hybrida |
| AAD52659.1 | AF177392 | Oryza sativa | BAA12159.1 | D83968 | Glycine max |
| AAF23903.1 | AF194416 | Oryza sativa | AAA32913.1 | M32885 | Persea americana |
| AAA92823.1 | U18365 | Oryza sativa | CAA70575.1 | Y09423 | Nepeta racemosa |
| AAB57843.1 | U96716 | Brassica napus | AAB94587.1 | AF022458 | Glycine max |
| CAB61750.1 | AJ275316 | Selaginella lepidophylla | AAC39454.1 | AF014802 | Eschscholzia californica |
| CAA71242.1 | Y10160 | Cicer arietinum | CAA70576.1 | Y09424 | Nepeta racemosa |
| BAA33152.1 | AB008187 | Chenopodium rubrum | AAB94590.1 | AF022461 | Glycine max |
| AAG01534.1 | AF289467 | Pisum sativum | BAB40323.1 | AB037244 | Asparagus officinalis |
| CAA66233.1 | X97637 | Nicotiana tabacum | BAB40324.1 | AB037245 | Asparagus officinalis |
| | | Antirrhinum majus | AAA19701.1 | I24438 | Thlaspi arvense |
| SEQ ID NO. 1472 | | | BAA84071.1 | AB028151 | Antirrhinum majus |
| CAA56175.1 | X79779 | Solanum tuberosum | BAA13076.1 | D86351 | Glycine max |
| BAA96150.1 | AP002092 | Oryza sativa | AAD38930.1 | AF135485 | Glycine max |
| BAA96192.1 | AP002093 | Oryza sativa | AAC32274.1 | AF081575 | Petunia x hybrida |
| CAB62555.1 | AJ249962 | Daucus carota | | | |
| AAF81251.1 | AF267755 | Mesembryanthemum crystallinum | SEQ ID NO. 1479 | | |
| CAA70896.1 | Y09749 | Vicia faba | AAC36318.1 | AF053127 | Malus x domestica |
| CAA70894.1 | Y09747 | Zea mays | AAF91324.1 | AF244890 | Glycine max |
| CAA70895.1 | Y09748 | Hordeum vulgare | AAF91323.1 | AF244889 | Glycine max |
| CAA70900.1 | Y09753 | Secale cereale | CAA61510.1 | X89226 | Oryza sativa |
| CAA70899.1 | Y09752 | Secale cereale | AAF59906.1 | AF197947 | Glycine max |
| AAF33670.1 | AF079872 | Nicotiana tabacum | AAF59905.1 | AF197946 | Glycine max |
| CAA70897.1 | Y09750 | Plantago major | AAF91322.1 | AF244888 | Glycine max |
| AAF33669.1 | AF079871 | Nicotiana tabacum | CAC20842.1 | AJ250467 | Pinus sylvestris |
| | | | AAB36558.1 | U77888 | Ipomoea nil |
| SEQ ID NO. 1473 | | | BAA83373.1 | AP000391 | Oryza sativa |
| CAB43505.1 | AJ239051 | Cicer arietinum | BAA84787.1 | AP000559 | Oryza sativa |
| BAA22422.1 | AB001379 | Glycyrrhiza echinata | AAF34426.1 | AF172282 | Oryza sativa |
| BAA93634.1 | AB025016 | Lotus japonicus | AAC80225.1 | U72723 | Oryza longistaminata |
| BAA74465.1 | AB022732 | Glycyrrhiza echinata | AAC49123.1 | U37133 | Oryza sativa |

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|-----------------|----------|-----------------------------|-----------------|-------------------|
| AAB82755.1 | U72725 | Oryza longistaminata | SEQ ID NO. 1481 | Malus x domestica |
| AAG52992.1 | U77888 | Ipomoea nil | AAK25768.1 | AF336307 |
| AAB82756.1 | U72724 | Oryza sativa | AAA73872.1 | L4142 |
| AAB82753.1 | U72726 | Oryza longistaminata | CAA36676.1 | X52429 |
| BAA88636.1 | AB029327 | Nicotiana tabacum | AAG33924.1 | AY009094 |
| AAG52994.1 | U77888 | Ipomoea nil | AAB84193.1 | AF029242 |
| | | | AAC62104.1 | AF091513 |
| SEQ ID NO. 1480 | | | SEQ ID NO. 1482 | |
| AAD21872.1 | AF078082 | Phaseolus vulgaris | CAA07563.1 | AJ007574 |
| AAC23542.1 | U20948 | Ipomoea trifida | CAA10608.1 | AJ132228 |
| CAA73134.1 | Y12531 | Brassica oleracea | CAA70778.1 | Y09591 |
| CAA74662.1 | Y14286 | Brassica oleracea | AAD16014.1 | AF080543 |
| CAA67145.1 | X98520 | Brassica oleracea | CAA70969.1 | Y09826 |
| CAA73133.1 | Y12530 | Brassica oleracea | AAD16015.1 | AF080544 |
| AAB93834.1 | U82481 | Zea mays | CAA70968.1 | Y09825 |
| AAA33008.1 | M97667 | Brassica napus | CAA92992.1 | Z68759 |
| CAB89179.1 | AJ245479 | Brassica napus subsp. napus | AAD16013.1 | AF080542 |
| AAA33000.1 | M76647 | Brassica oleracea | AAF15945.1 | AF061435 |
| CAA74661.1 | Y14285 | Brassica oleracea | CAA72006.1 | Y11121 |
| BAA23676.1 | AB000970 | Brassica rapa | AAF15944.1 | AF061434 |
| CAB41878.1 | Y18259 | Brassica oleracea | AAF15946.1 | AF061436 |
| CAB41879.1 | Y18260 | Brassica oleracea | AAB48944.1 | U31932 |
| AAA62232.1 | U00443 | Brassica napus | AAB96830.1 | U64823 |
| CAA79355.1 | Z18921 | Brassica oleracea | AAD25162.1 | AF014810 |
| BAA07576.1 | D38563 | Brassica rapa | BAA93437.1 | AB022783 |
| BAA92837.1 | AB032474 | Brassica oleracea | AAD25161.1 | AF014809 |
| BAA92836.1 | AB032473 | Brassica oleracea | AAD25160.1 | AF014808 |
| BAB21001.1 | AB054061 | Brassica rapa | AAF76897.1 | AF274032 |
| BAA07577.2 | D38564 | Brassica rapa | CAB42599.1 | AJ238635 |
| BAA06285.1 | D30049 | Brassica rapa | SEQ ID NO. 1484 | |
| BAA21132.1 | D88193 | Brassica rapa | AAG13408.1 | AF297472 |
| AAD52097.1 | AF088885 | Nicotiana tabacum | AAG13407.1 | AF297471 |
| BAA94509.1 | AB041503 | Populus nigra | AAA32993.1 | M81224 |
| BAA94510.1 | AB041504 | Populus nigra | AAA33011.1 | L21896 |
| AAC27489.1 | AF077130 | Oryza sativa | CAA08862.1 | Z24737 |
| AAB61708.1 | U93048 | Daucus carota | CAB39890.1 | AJ237582 |
| AAF78016.1 | AF238472 | Oryza sativa | CAA10234.1 | AJ130888 |
| AAC02535.1 | AF044260 | Oryza sativa | SEQ ID NO. 1485 | |
| AAC49629.1 | U51330 | Triticum aestivum | | |
| AAA33915.1 | L27821 | Oryza sativa | | |

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|-----------------|----------|--------------------------------|-----------------|----------|------------------------------|
| BAA76745.1 | D89972 | Vigna mungo | AAG36774.1 | AF210616 | Zea mays |
| CAB64544.1 | AV131718 | Zea mays | CAA75509.1 | Y15219 | Oryza sativa subsp. indica |
| BAA76744.1 | D89971 | Vigna mungo | | | |
| CAB64545.1 | AJ131719 | Zea mays | SEQ ID NO. 1489 | | |
| BAA04225.1 | D17401 | Ricinus communis | BAA08094.1 | D45066 | Cucurbita maxima |
| CAB16318.1 | Z99174 | Vicia narbonensis | BAA88190.1 | AP000836 | Oryza sativa |
| CAA07639.1 | AJ007743 | Vicia sativa | CAA46875.1 | X66076 | Zea mays |
| CAB51545.1 | AJ243876 | Lycopersicon esculentum | AAB70119.1 | U82230 | Zea mays |
| | | | CAA09976.1 | AJ012284 | Triticum aestivum |
| SEQ ID NO. 1486 | | | CAA04440.1 | AJ000991 | Hordeum vulgare |
| CAA45701.1 | X64349 | Nicotiana tabacum | CAB89831.1 | AJ242853 | Solanum tuberosum |
| CRA78043.1 | Z11999 | Lycopersicon esculentum | CAA66604.1 | X97945 | Nicotiana tabacum |
| CAA35601.1 | X17578 | Solanum tuberosum | BAA78574.1 | AB028131 | Oryza sativa |
| BAA96365.2 | AB043960 | Bruguiera gymnorrhiza | | | |
| AAC04808.1 | AF037457 | Fritillaria agrestis | SEQ ID NO. 1490 | | |
| BAA02554.1 | D13297 | Pisum sativum | CAC10555.1 | AJ279059 | Lotus japonicus |
| CAA40570.1 | X57408 | Triticum aestivum | CAA64475.1 | X95098 | Lycopersicon esculentum |
| AAD38521.1 | AF139818 | Brassica napus | AAG28780.1 | AF306518 | Brassica napus |
| AAD55562.1 | AF110780 | Volvox carterii f. nagariensis | AAG11397.1 | AF118858 | Lycopersicon esculentum |
| CAA36674.1 | X52427 | Lycopersicon esculentum | AAD16012.1 | AF080541 | Nepenthes alata |
| | | | AAF01774.1 | AF188744 | Brassica napus |
| SEQ ID NO. 1487 | | | | | |
| CAA71238.1 | Y10156 | Brassica napus | SEQ ID NO. 1491 | | |
| CAA71237.1 | Y10155 | Brassica napus | AAD02462.1 | AF047490 | Zea mays |
| CAB62165.1 | AJ223307 | Brassica napus | AAG10425.1 | AF251013 | Tagetes erecta |
| AAC49181.1 | U39289 | Brassica napus | CAA12062.1 | AJ224683 | Narcissus pseudonarcissus |
| AAC49182.1 | U39319 | Brassica napus | AAF13698.1 | AF195507 | Lycopersicon esculentum |
| | | | CAA61985.1 | X89897 | Capsicum annuum |
| SEQ ID NO. 1488 | | | AAG14399.1 | AF054629 | Oryza sativa |
| CAA64615.1 | X95297 | Lycopersicon esculentum | CAA55392.1 | X78815 | Narcissus pseudonarcissus |
| CAA67600.1 | X99210 | Lycopersicon esculentum | CAA42573.1 | X59948 | Lycopersicon esculentum |
| CAB43399.1 | AJ006292 | Antirrhinum majus | AAA68865.1 | M88683 | Lycopersicon esculentum |
| CAA78386.1 | Z13996 | Petunia x hybrida | CAA55078.1 | X78271 | Lycopersicon esculentum |
| AAF22256.1 | AF161711 | Pimpinella brachycarpa | CAB59726.1 | X71023 | Lycopersicon esculentum |
| CAA64614.1 | X95296 | Lycopersicon esculentum | AAG10645.1 | AF086803 | Oryza sativa subsp. japonica |
| BAA88224.1 | AB028652 | Nicotiana tabacum | AAG10426.1 | AF251014 | Tagetes erecta |
| CAA78387.1 | Z13997 | Petunia x hybrida | BAB08179.1 | AB046992 | Citrus unshiu |
| BAA88221.1 | AB028649 | Nicotiana tabacum | AAA99519.1 | L39266 | Zea mays |
| BAA88222.1 | AB028650 | Nicotiana tabacum | CAA48195.1 | X68058 | Capsicum annuum |
| CAA66952.1 | X98308 | Lycopersicon esculentum | AAC12846.1 | U37285 | Zea mays |
| AAA33500.1 | M73028 | Zea mays | CAA75094.1 | Y14807 | Dunaliella bardawil |

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| AA02489.1 | AF049356 | Oryza sativa | AA059905.1 | AF197946 | Glycine max |
| CAA60479.1 | X86783 | Haematococcus pluvialis | BAA06538.1 | D31737 | Nicotiana tabacum |
| SEQ ID NO. 1492 | | | BAA94509.1 | AB041503 | Populus nigra |
| CAC05338.1 | AJ293028 | Brassica napus | AA091322.1 | AF244888 | Glycine max |
| CAA69387.1 | Y08210 | Nicotiana plumbaginifolia | AAK11566.1 | AF318490 | Lycopersicon hirsutum |
| BAA33382.1 | AB008519 | Oryza sativa | AB09771.1 | U67422 | Zea mays |
| AAK19519.1 | AF332214 | Triticum aestivum | AA036318.1 | AF053127 | Malus x domestica |
| AAC49531.1 | U34198 | Hordeum vulgare | AB47421.1 | U59316 | Lycopersicon esculentum |
| AAG01172.1 | AF288688 | Triticum aestivum | AA076313.1 | AF220603 | Lycopersicon esculentum |
| AAC49532.1 | U34290 | Hordeum vulgare | AAK11569.1 | AF318493 | Lycopersicon hirsutum |
| AAK02066.1 | AY026523 | Chlorella sorokiniana | BAA94510.1 | AB041504 | Populus nigra |
| CAA80925.1 | Z25438 | Chlamydomonas reinhardtii | AAK11674.1 | AF339747 | Lophopyrum elongatum |
| AAD38794.1 | AF153602 | Triticum aestivum | AA043496.1 | AF131222 | Lophopyrum elongatum |
| CAA80926.1 | Z25439 | Chlamydomonas reinhardtii | AA034428.1 | AF172282 | Oryza sativa |
| CAA11238.1 | AJ223296 | Chlamydomonas reinhardtii | AAK11567.1 | AF318491 | Lycopersicon hirsutum |
| SEQ ID NO. 1493 | | | AB47423.1 | U59315 | Lycopersicon pimpinellifolium |
| AAC16403.1 | U82810 | Glycine max | AAC48914.1 | U02271 | Lycopersicon pimpinellifolium |
| CAA63338.1 | X92646 | Helianthus annuus | AA076306.1 | AF220602 | Lycopersicon pimpinellifolium |
| BAA76309.1 | AB019617 | Triticum aestivum | AA016628.1 | AY007545 | Brassica napus |
| AA070536.1 | AF017356 | Oryza sativa | SEQ ID NO. 1497 | | |
| CAA79273.1 | Z18809 | Onoclea sensibilis | AA021872.1 | AF078082 | Phaseolus vulgaris |
| SEQ ID NO. 1494 | | | AA023542.1 | U20948 | Ipomoea trifida |
| CAA67291.1 | X98739 | Pisum sativum | CAA73134.1 | Y12531 | Brassica oleracea |
| CAA67290.1 | X98738 | Pisum sativum | AA093834.1 | U82481 | Zea mays |
| SEQ ID NO. 1496 | | | CAA74662.1 | Y14286 | Brassica oleracea |
| AAG00510.1 | AF285172 | Phaseolus vulgaris | BAA23676.1 | AB000970 | Brassica rapa |
| BAA84787.1 | AP000559 | Oryza sativa | CAA73133.1 | Y12530 | Brassica oleracea |
| BAA83373.1 | AP000391 | Oryza sativa | CAA67145.1 | X98520 | Brassica oleracea |
| CAA97692.1 | Z73295 | Catharanthus roseus | CAA74661.1 | Y14285 | Brassica oleracea |
| AAK21965.1 | AY028699 | Brassica napus | CAB41879.1 | Y18260 | Brassica oleracea |
| CAB51834.1 | 00069 | Oryza sativa | CAB41878.1 | Y18259 | Brassica oleracea |
| AB61708.1 | U93048 | Daucus carota | AAA33000.1 | M76647 | Brassica oleracea |
| CAA61510.1 | X89226 | Oryza sativa | CAB89179.1 | AJ245479 | Brassica napus subsp. napus |
| BAA78764.1 | AB023482 | Oryza sativa | AAA33008.1 | M97667 | Brassica napus |
| AA059906.1 | AF197947 | Glycine max | BAA92836.1 | AB032473 | Brassica oleracea |
| AA091324.1 | AF244890 | Glycine max | BAA07576.1 | D38563 | Brassica rapa |
| AA091323.1 | AF244889 | Glycine max | AAA62232.1 | U00443 | Brassica napus |
| | | | BAA92837.1 | AB032474 | Brassica oleracea |
| | | | BAB21001.1 | AB054061 | Brassica rapa |
| | | | BAA07577.2 | D38564 | Brassica rapa |

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| CAA79355.1 | Z18921 | Brassica oleracea |
| BAA06285.1 | D30049 | Brassica rapa |
| BAA21132.1 | D88193 | Brassica rapa |
| AAD52097.1 | AF088885 | Nicotiana tabacum |
| AAK21965.1 | AY028699 | Brassica napus |
| AAI16628.1 | AY007545 | Brassica napus |
| BAA94509.1 | AB041503 | Populus nigra |
| BRA94510.1 | AB041504 | Populus nigra |
| AAQ03090.1 | AC073405 | Oryza sativa |
| SEQ ID NO. | 1498 | |
| CAA76374.2 | Y16776 | Spinacia oleracea |
| AAD11481.1 | U51191 | Glycine max |
| AAD11482.1 | U51192 | Glycine max |
| AAA65637.1 | L13654 | Lycopersicon esculentum |
| BAA03644.1 | D14997 | Oryza sativa |
| CAA80502.1 | Z22920 | Spirodela polyrrhiza |
| AAA65636.1 | L13653 | Lycopersicon esculentum |
| BAA07664.1 | D42065 | Nicotiana tabacum |
| AAA32676.1 | M37637 | Arachis hypogaea |
| BAA07663.1 | D42064 | Nicotiana tabacum |
| AAB67737.1 | L77080 | Stylosanthes humilis |
| CAA64413.1 | X94943 | Lycopersicon esculentum |
| BAA82307.1 | AB027753 | Nicotiana tabacum |
| AAD11484.1 | U51194 | Glycine max |
| BAA77387.1 | AB024437 | Scutellaria baicalensis |
| AAD37375.1 | AF145349 | Glycine max |
| CAB65334.1 | AJ250121 | Picea abies |
| BAA82306.1 | AB027752 | Nicotiana tabacum |
| AAD37429.2 | AF149279 | Phaseolus vulgaris |
| AAF63024.1 | AF244921 | Spinacia oleracea |
| CAB94692.1 | AJ242742 | Ipomoea batatas |
| AAD11483.1 | U51193 | Glycine max |
| CAC21393.1 | AJ401276 | Zea mays |
| AAB97734.1 | AF014502 | Glycine max |
| CAA62226.1 | X90693 | Medicago sativa |
| BAA08499.1 | D49551 | Oryza sativa |
| BAA89584.1 | AP001073 | Oryza sativa |
| AAAC9365.1 | AP001081 | Oryza sativa |
| AAAC98519.1 | AF007211 | Glycine max |
| AAA34108.1 | J02979 | Nicotiana tabacum |
| CAA50597.1 | X71593 | Lycopersicon esculentum |
| BAA01992.1 | D11396 | Nicotiana tabacum |
| BAA92500.1 | AP001383 | Oryza sativa |
| CAA62597.1 | X91172 | Raphanus sativus |
| AAD43561.1 | AF155124 | Gossypium hirsutum |
| AAD37430.1 | AF149280 | Phaseolus vulgaris |
| CAA76376.1 | Y16778 | Spinacia oleracea |
| CAB67121.1 | Y19023 | Lycopersicon esculentum |
| CAA76680.1 | Y17192 | Cucurbita pepo |
| CAA71494.1 | Y10468 | Spinacia oleracea |
| BAA94962.1 | AB042103 | Asparagus officinalis |
| BAA06335.1 | D30653 | Populus kitakamiensis |
| CAA66037.1 | X97351 | Populus balsamifera subsp. trichocarpa |
| AAA34050.1 | M74103 | Nicotiana sylvestris |
| CAA62227.1 | X90694 | Medicago sativa |
| AAF63027.1 | AF244924 | Spinacia oleracea |
| SEQ ID NO. | 1499 | |
| AAB94589.1 | AF022460 | Glycine max |
| AAA32913.1 | M32885 | Persea americana |
| AAA19701.1 | I24438 | Thlaspi arvense |
| BAB40324.1 | AB037245 | Asparagus officinalis |
| AAC39318.1 | AF029858 | Sorghum bicolor |
| BAB40323.1 | AB037244 | Asparagus officinalis |
| CAAT0575.1 | Y09423 | Nepeta racemosa |
| AAD47832.1 | AF166332 | Nicotiana tabacum |
| AAB94588.1 | AF022459 | Glycine max |
| AAF27282.1 | AF122821 | Capsicum annuum |
| CAA50312.1 | X70981 | Solanum melongena |
| CAA83941.1 | Z33875 | Mentha x piperita |
| AAG44132.1 | AF218296 | Pisum sativum |
| CAAT0576.1 | Y09424 | Nepeta racemosa |
| AAD44151.1 | AF124816 | Mentha x piperita |
| BAA03635.1 | D14990 | Solanum melongena |
| CAA50645.1 | X71654 | Solanum melongena |
| AAD37433.1 | AF150881 | Lycopersicon esculentum x Lycopersicon peruvianum |
| CAA65580.1 | X96784 | Nicotiana tabacum |
| AAD44152.1 | AF124817 | Mentha x piperita |
| CAA64635.1 | X95342 | Nicotiana tabacum |

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|-----------------|----------|-------------------------|------------|----------|-------------------------|
| AAG14962.1 | AF214008 | Brassica napus | AAG61118.1 | AF329371 | Zea mays |
| AAG14961.1 | AF214007 | Brassica napus | AAB67860.1 | U60201 | Solanum tuberosum |
| CAB56503.1 | AJ238612 | Catharanthus roseus | AAA53184.1 | U09026 | Lycopersicon esculentum |
| AAG14963.1 | AF214009 | Brassica napus | AAG21691.1 | AY008278 | Lycopersicon esculentum |
| AAD44150.1 | AF124815 | Mentha spicata | CAA64766.1 | X95513 | Solanum tuberosum |
| AAD56282.1 | AF155332 | Petunia x hybrida | CAB65460.1 | Y18548 | Solanum tuberosum |
| AAB94584.1 | AF022157 | Glycine max | AAB67858.1 | U60200 | Solanum tuberosum |
| BAA12159.1 | D83968 | Glycine max | AAB81595.1 | AF019614 | Solanum tuberosum |
| CAA50155.1 | X70824 | Solanum melongena | CAA55724.1 | X79107 | Solanum tuberosum |
| SEQ ID NO. 1500 | | | AAB18970.2 | U76687 | Phaseolus vulgaris |
| CAC24844.1 | AJ303354 | Hordeum vulgare | AAB81594.1 | AF019613 | Solanum tuberosum |
| SEQ ID NO. 1501 | | | AAA64893.1 | L35931 | Hordeum vulgare |
| BAA33415.1 | AB017525 | Brassica napus | CAA55318.1 | X78580 | Pisum sativum |
| BAA33417.1 | AB017527 | Brassica napus | AAA79186.1 | U36339 | Cucumis sativus |
| BAA33418.1 | AB017528 | Brassica rapa | CAB83038.1 | AJ271161 | Cucumis sativus |
| BAA33421.1 | AB017531 | Brassica oleracea | AAB60715.1 | L37359 | Hordeum vulgare |
| BAA33419.1 | AB017529 | Brassica rapa | CAA58859.1 | X84040 | Nicotiana tabacum |
| BAA33416.1 | AB017526 | Brassica napus | AAF15296.2 | AF204210 | Phaseolus vulgaris |
| BAA33420.1 | AB017530 | Brassica oleracea | AAB31252.1 | S73865 | Solanum tuberosum |
| AAG31808.1 | AF316419 | Lolium perenne | BAA03042.1 | D13949 | Glycine max |
| SEQ ID NO. 1502 | | | CAA97845.1 | Z73498 | Vicia faba |
| AAK35215.1 | AF355602 | Zea mays | AA333987.1 | J03211 | Glycine max |
| AAK27688.1 | AF347614 | Lycopersicon esculentum | AAB67865.1 | U60202 | Solanum tuberosum |
| CAA65291.1 | X96431 | Hordeum vulgare | CAA63483.1 | X92890 | Cucumis sativus |
| AAA97952.1 | U52867 | Hordeum vulgare | AAC49159.1 | U36191 | Glycine max |
| AAK27687.1 | AF347613 | Lycopersicon esculentum | AAC61785.1 | U25058 | Cucumis sativus |
| CAA57711.1 | X82256 | Stylosanthes hamata | AAD04258.1 | AF039651 | Solanum tuberosum |
| AAG41419.1 | AF309643 | Solanum tuberosum | CAA75609.1 | Y15410 | Pisum sativum |
| CAA57710.1 | X82255 | Stylosanthes hamata | AAB71759.1 | U84198 | Pisum sativum |
| CAA65536.1 | X96761 | Sporobolus stapfianus | AAD09202.1 | U24232 | Solanum tuberosum |
| CAA57831.1 | X82454 | Stylosanthes hamata | AAB67732.1 | U50075 | Glycine max |
| CAA11413.1 | AJ223495 | Brassica juncea | CAA39604.1 | X56139 | Glycine max |
| AAB94543.1 | AF016306 | Zea mays | CAA64765.1 | X95512 | Solanum tuberosum |
| SEQ ID NO. 1504 | | | AAA74393.1 | U13681 | Lycopersicon esculentum |
| CAB94852.1 | AJ404331 | Prunus dulcis | AAA53183.1 | U09025 | Lycopersicon esculentum |
| CAA34906.1 | X17061 | Pisum sativum | AAB41272.1 | U50081 | Glycine max |
| AAF76207.1 | AF271894 | Zea mays | CAA30016.1 | X06928 | Glycine max |
| | | | CAA55319.1 | X78581 | Pisum sativum |
| | | | CAA47717.1 | X67304 | Glycine max |
| | | | CAA45088.1 | X63525 | Phaseolus vulgaris |
| | | | AAA33986.1 | J02795 | Glycine max |

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|-----------------|----------|---|-----------------|----------|-------------------------------|
| AAA03726.1 | U04785 | Glycine max | AAA33915.1 | L27821 | Oryza sativa |
| CAA64769.1 | X95516 | Solanum tuberosum | AAD21872.1 | AF078082 | Phaseolus vulgaris |
| SEQ ID NO. 1505 | | | AAG03090.1 | AC073405 | Oryza sativa |
| BAA08479.1 | D49535 | Citrullus lanatus | BAA94510.1 | AB041504 | Populus nigra |
| BAA12843.1 | D85624 | Citrullus lanatus | AAG16628.1 | AY007545 | Brassica napus |
| BAA21827.1 | AB006530 | Citrullus lanatus | BAA94509.1 | AB041503 | Populus nigra |
| BAA13635.1 | D88530 | Spinacia oleracea | CAA97692.1 | Z73295 | Catharanthus roseus |
| BAA13634.1 | D88529 | Spinacia oleracea | CAB51834.1 | 00069 | Oryza sativa |
| BAA93050.1 | AB040502 | Allium tuberosum | BAA84787.1 | AF000559 | Oryza sativa |
| AAF19000.1 | AF212156 | Allium cepa | BAA83373.1 | AF000391 | Oryza sativa |
| SEQ ID NO. 1506 | | | BAA92954.1 | AF001551 | Oryza sativa |
| AAD48912.1 | AF139532 | Liquidambar styraciflua | AAF43496.1 | AF131222 | Lophopyrum elongatum |
| CAC26920.1 | AJ295586 | Arabidopsis lyrata subsp. petraea | AAK11674.1 | AF339747 | Lophopyrum elongatum |
| AAD37433.1 | AF150881 | Lycopersicon esculentum x Lycopersicon peruvianum | BAA94529.2 | AP001800 | Oryza sativa |
| CAB65335.1 | AJ010324 | Populus balsamifera subsp. trichocarpa | BAA94517.1 | AP001800 | Oryza sativa |
| AAG49301.1 | AF313491 | Matthiola incana | BAA78764.1 | AB023482 | Oryza sativa |
| AAD56282.1 | AF155332 | Petunia x hybrida | BAA94516.1 | AP001800 | Oryza sativa |
| AAG49299.1 | AF313489 | Callistephus chinensis | AAB93834.1 | U82481 | Zea mays |
| AAG49315.1 | AF315465 | Pelargonium x hortorum | AAF76314.1 | AF220603 | Lycopersicon esculentum |
| CAA80266.1 | Z22545 | Petunia x hybrida | AAB47424.1 | U59317 | Lycopersicon pimpinellifolium |
| BAA03438.1 | D14588 | Petunia x hybrida | AAF76307.1 | AF220602 | Lycopersicon pimpinellifolium |
| AAC32274.1 | AF081575 | Petunia x hybrida | CAA67145.1 | X98520 | Brassica oleracea |
| CAA09850.1 | AJ011862 | Catharanthus roseus | SEQ ID NO. 1511 | | |
| CAA80265.1 | Z22544 | Petunia x hybrida | CAA50498.1 | X71360 | Malus sp. |
| AAG49300.1 | AF313490 | Lycianthes rantonnei | AAC49826.1 | U71604 | Catharanthus roseus |
| BAA03440.1 | D14590 | Campanula medium | AAC49827.1 | U71605 | Catharanthus roseus |
| CAA50645.1 | X71654 | Solanum melongena | AAB97311.1 | AF008597 | Catharanthus roseus |
| CAA50155.1 | X70824 | Solanum melongena | AAD26206.1 | AF117270 | Malus x domestica |
| CAA50312.1 | X70981 | Solanum melongena | CAA53579.1 | X75965 | Vitis vinifera |
| SEQ ID NO. 1508 | | | BAA78340.1 | AB017153 | Atropa belladonna |
| AAB37246.1 | U58971 | Nicotiana tabacum | CAA55628.1 | X78994 | Medicago sativa |
| SEQ ID NO. 1510 | | | AAC97525.1 | U23066 | Persea americana |
| AAB61708.1 | U93048 | Daucus carota | BAA19657.1 | AB002816 | Perilla frutescens |
| AAK21965.1 | AY028659 | Brassica napus | AAC86820.1 | U93210 | Pisum sativum |
| | | | CAA57410.1 | X81812 | Medicago sativa |
| | | | AAA91227.1 | U04434 | Zea mays |
| | | | AAC15414.1 | AF036093 | Nicotiana tabacum |
| | | | AAB97310.1 | U86837 | Chrysanthemum x morifolium |
| | | | BAA05630.1 | D26583 | Hyoscyamus niger |

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| AAA33387.1 | M62719 | Hyoscyamus niger | BAA82307.1 | AB027753 | Nicotiana tabacum |
| AAD56577.1 | AF184270 | Daucus carota | AAB67737.1 | L77080 | Stylosanthes humilis |
| SEQ ID NO. 1515 | | | AAD37429.2 | AF149279 | Phaseolus vulgaris |
| AAC32138.1 | AF051237 | Picea mariana | CAA71494.1 | Y10468 | Spinacia oleracea |
| SEQ ID NO. 1517 | | | AAD37375.1 | AF145349 | Glycine max |
| AAF61647.1 | AF190634 | Nicotiana tabacum | AAF63024.1 | AF244921 | Spinacia oleracea |
| BAA89009.1 | AB027455 | Petunia x hybrida | CAA66037.1 | X97351 | Populus balsamifera subsp. |
| BAA36421.1 | AB013596 | Perilla frutescens | trichocarpa | | |
| BAA36423.1 | AB013598 | Verbena x hybrida | AAA65637.1 | L13654 | Lycopersicon esculentum |
| BAA93039.1 | AB033758 | Citrus unshiu | CAA40796.1 | X57564 | Armoracia rusticana |
| BAA36422.1 | AB013597 | Perilla frutescens | AAD11482.1 | U51192 | Glycine max |
| AAF98390.1 | AF287143 | Brassica napus | CAA80502.1 | Z22920 | Spirodela polyrrhiza |
| AAD21086.1 | AF127218 | Forsythia x intermedia | BAA77387.1 | AB024437 | Scutellaria baicalensis |
| BAA12737.1 | D85186 | Gentiana triflora | CAA59485.1 | X85228 | Triticum aestivum |
| BAA90787.1 | AB038248 | Ipomoea batatas | BAA07663.1 | D42064 | Nicotiana tabacum |
| AAF17077.1 | AF199453 | Sorghum bicolor | BAA11853.1 | D83225 | Populus nigra |
| AAD04166.1 | AF101972 | Phaseolus lunatus | BAA07664.1 | D42065 | Nicotiana tabacum |
| BAA89008.1 | AB027454 | Petunia x hybrida | AAD37430.1 | AF149280 | Phaseolus vulgaris |
| AAB86473.1 | AF028237 | Ipomoea purpurea | AAD11481.1 | U51191 | Glycine max |
| BAA19659.1 | AB002818 | Perilla frutescens | CAB94692.1 | AJ242742 | Ipomoea batatas |
| CAA54612.1 | X77462 | Manihot esculenta | BAA03644.1 | D14997 | Oryza sativa |
| BAA83484.1 | AB031274 | Scutellaria baicalensis | AAD43561.1 | AF155124 | Gossypium hirsutum |
| BAB41018.1 | AB047091 | Vitis labrusca x Vitis vinifera | BAA06334.1 | D30652 | Populus kitakamiensis |
| CAA59450.1 | X85138 | Lycopersicon esculentum | BAA92500.1 | AP001383 | Oryza sativa |
| BAB41020.1 | AB047093 | Vitis vinifera | BAA90365.1 | AP001081 | Oryza sativa |
| BAB41022.1 | AB047095 | Vitis vinifera | BAA89584.1 | AP001073 | Oryza sativa |
| AAB81682.1 | AF000371 | Vitis vinifera | AAC49820.1 | AF014469 | Oryza sativa |
| BAB41017.1 | AB047090 | Vitis labrusca x Vitis vinifera | CAA66034.1 | X97348 | Populus balsamifera subsp. |
| BAB41026.1 | AB047099 | Vitis vinifera | trichocarpa | | |
| BAB41024.1 | AB047097 | Vitis vinifera | BAA14144.1 | D90116 | Armoracia rusticana |
| BAB41025.1 | AB047098 | Vitis vinifera | AAB97734.1 | AF014502 | Glycine max |
| BAB41023.1 | AB047096 | Vitis vinifera | CAA37713.1 | X53675 | Triticum aestivum |
| BAB41021.1 | AB047094 | Vitis vinifera | AAC05277.1 | AF049881 | Linum usitatissimum |
| BAB41019.1 | AB047092 | Vitis vinifera | CAA66035.1 | X97349 | Populus balsamifera subsp. |
| AAB81683.1 | AF000372 | Vitis vinifera | trichocarpa | | |
| SEQ ID NO. 1518 | | | BAA06335.1 | D30653 | Populus kitakamiensis |
| CAA64413.1 | X94943 | Lycopersicon esculentum | CAA39486.1 | X56011 | Triticum aestivum |
| AAA32676.1 | M37637 | Arachis hypogaea | BAA03911.1 | D16442 | Oryza sativa |
| | | | BAA94962.1 | AB042103 | Asparagus officinalis |
| | | | AAC49821.1 | AF014470 | Oryza sativa |
| | | | AAD37427.1 | AF149277 | Phaseolus vulgaris |

| CAA76374.2 | Y16776 | Spinacia oleracea | SEQ ID NO. 1529 |
|-----------------|----------|--|---|
| BAA08499.1 | D49551 | Oryza sativa | AAC49792.1 AF001219 Pisum sativum |
| CAA66036.1 | X97350 | Populus balsamifera subsp. trichocarpa | AAC86820.1 U93210 Pisum sativum |
| AAA34108.1 | J02979 | Nicotiana tabacum | AAC49793.1 AF010167 Pisum sativum |
| CAA62226.1 | X90693 | Medicago sativa | AAC96017.1 AF007766 Pisum sativum |
| CAA59487.1 | X85230 | Triticum aestivum | AAC96015.1 AF004730 Pisum sativum |
| SEQ ID NO. 1520 | | | AAC49794.1 AF010168 Pisum sativum |
| CAA39438.1 | X55967 | Zea mays | BAA89316.1 AB032198 Nicotiana tabacum |
| AAC14469.1 | L28831 | Glycine max | BAA37129.1 AB012205 Lactuca sativa |
| AAF34771.1 | AF227626 | Euphorbia esula | BAA34124.1 AB010991 Lycopersicon esculentum |
| AAA34006.1 | M31024 | Glycine max | BAA37130.1 AB012206 Lactuca sativa |
| CAA46835.1 | X56036 | Dunaliella tertiolecta | BAA34125.1 AB010992 Lycopersicon esculentum |
| SEQ ID NO. 1522 | | | CAB92914.1 AJ006453 Cucurbita maxima |
| AAA33136.1 | L16983 | Daucus carota | BAB12439.1 AB031203 Lactuca sativa |
| CAA61158.1 | X87931 | Beta vulgaris | AAB64347.1 U63650 Cucurbita maxima |
| SEQ ID NO. 1523 | | | BAB32734.1 AB049408 Eustoma grandiflorum |
| AAA80598.1 | U20502 | Glycine max | BAB12438.1 AB031202 Lactuca sativa |
| CAA54678.1 | X77569 | Zea mays | AAD45425.1 AF100955 Pisum sativum |
| CAA76741.1 | Y17329 | Pisum sativum | AAF08609.1 AF056935 Pisum sativum |
| CAA84491.1 | Z35108 | Helianthus tuberosus | AAF13735.1 AF101383 Pisum sativum |
| SEQ ID NO. 1525 | | | BAB12442.1 AB031206 Lactuca sativa |
| BAA97122.1 | AB016264 | Nicotiana sylvestris | CAC26921.1 AJ295607 Arabidopsis lyrata subsp. petraea |
| BBA07321.1 | D38123 | Nicotiana tabacum | AAC49757.1 U70531 Phaseolus vulgaris |
| BBA87068.1 | AB035270 | Matricaria chamomilla | CRA50498.1 X71360 Malus sp. |
| BBA97124.1 | AB016266 | Nicotiana sylvestris | BAA32156.1 AB012856 Nicotiana tabacum |
| AAC62619.1 | AF057373 | Nicotiana tabacum | AAG43043.1 AY014277 Lolium perenne |
| AAF05606.1 | AF190770 | Oryza sativa | AAD15755.1 AF049898 Lycopersicon esculentum |
| BAA81845.1 | AB026295 | Oryza sativa | CAB96202.1 AJ250187 Citrus sinensis x Poncirus trifoliata |
| BAA97123.1 | AB016265 | Nicotiana sylvestris | AAG43044.1 AY014280 Lolium perenne |
| BBA76734.1 | AB024575 | Nicotiana tabacum | SEQ ID NO. 1530 |
| BAB03248.1 | AB037183 | Oryza sativa | AAG43286.1 AF140228 Oryza sativa |
| AAD00708.1 | U91857 | Stylosanthes hamata | SEQ ID NO. 1536 |
| SEQ ID NO. 1528 | | | BAA82556.1 AB030083 Populus nigra |
| CAA61275.1 | X88797 | Eucalyptus gunnii | ABAB1708.1 U93048 Daucus carota |
| | | | AAK21965.1 AY028699 Brassica napus |
| | | | AAB33834.1 U82481 Zea mays |
| | | | AAD21872.1 AF078082 Phaseolus vulgaris |

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| AAC23542.1 | U20948 | Ipomoea trifida |
| CAA73134.1 | Y12531 | Brassica oleracea |
| CAB51834.1 | 00069 | Oryza sativa |
| BAA94509.1 | AB041503 | Populus nigra |
| AAG16628.1 | AY007545 | Brassica napus |
| BAA92954.1 | AP001551 | Oryza sativa |
| BAA94510.1 | AB041504 | Populus nigra |
| AAG03090.1 | AC073405 | Oryza sativa |
| AAF91322.1 | AF244888 | Glycine max |
| BAA94517.1 | AP001800 | Oryza sativa |
| CAB51836.1 | AJ243961 | Oryza sativa |
| BAA78764.1 | AB023482 | Oryza sativa |
| AAA33915.1 | L27821 | Oryza sativa |
| AAF91323.1 | AF244889 | Glycine max |
| CAA67145.1 | X98520 | Brassica oleracea |
| CAA73133.1 | Y12530 | Brassica oleracea |
| AAF91324.1 | AF244890 | Glycine max |
| CAA74661.1 | Y14285 | Brassica oleracea |
| BAA92953.1 | AP001551 | Oryza sativa |
| AAF43496.1 | AF131222 | Lophopyrum elongatum |
| AAK11674.1 | AF339747 | Lophopyrum elongatum |
| BAA94516.1 | AP001800 | Oryza sativa |
| CAB41878.1 | Y18259 | Brassica oleracea |
| BAA23676.1 | AB000970 | Brassica rapa |
| CAB41879.1 | Y18260 | Brassica oleracea |
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| SEQ ID NO. | 1537 | |
| AAD25300.1 | AF088276 | Lycopersicon esculentum |
| CAA63704.1 | X93301 | Oryza sativa |
| AAD24966.1 | AF109150 | Lycopersicon esculentum |
| AAD25225.1 | AF088279 | Potamogeton crispus |
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| SEQ ID NO. | 1538 | |
| AAC08525.1 | AF020814 | Pisum sativum |
| AAC08526.1 | AF020816 | Solanum tuberosum |
| AAC08524.1 | AF020813 | Zea mays |
| AAF86908.1 | AF223360 | Plastid Mesembryanthemum crystallinum |
| CAA48210.1 | X68077 | Pisum sativum |
| AAF86906.1 | AF223358 | Plastid Mesembryanthemum crystallinum |
| | | |
| CAA81386.1 | Z26633 | Flaveria pringlei |
| AA084890.1 | U13630 | Brassica oleracea |
| CA052979.1 | X75088 | Nicotiana tabacum |
| CA032016.1 | X13754 | Spinacia oleracea |
| AAK01174.2 | AF314182 | Triticum aestivum |
| AAB40649.1 | U66403 | Zea mays |
| CAA81349.1 | Z26595 | Zea mays |
| AAB40650.1 | U66404 | Zea mays |
| CAA47430.1 | X67045 | Solanum tuberosum |
| CAA81385.1 | Z26632 | Flaveria trinervia |
| AAK27373.1 | AY028422 | Oryza sativa |
| AAB40648.1 | U66402 | Nicotiana tabacum |
| AAF86907.1 | AF223359 | Plastid Mesembryanthemum crystallinum |
| AA084892.1 | U13632 | Brassica oleracea |
| AAB40647.1 | U66401 | Nicotiana tabacum |
| AAD55058.1 | AF173679 | Beta vulgaris |
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| SEQ ID NO. | 1539 | |
| AAG29748.1 | AF172172 | Medicago sativa |
| CAA68405.1 | Y00296 | Trema tomentosa |
| AAC28426.1 | AF027215 | Trema orientalis |
| AAB86653.1 | U27194 | Parasponia andersonii |
| CAB63706.1 | AJ131349 | Trema virgata |
| CAB63709.1 | AJ131352 | Trema virgata |
| CAA37898.1 | X53950 | Casuarina glauca |
| CAB16751.1 | Z99635 | Trema orientalis |
| CAB63707.1 | AJ131350 | Trema virgata |
| CAB63708.1 | AJ131351 | Trema virgata |
| AAA97887.1 | U47143 | Glycine max |
| AAB70097.1 | U94968 | Hordeum vulgare |
| AAG01183.1 | AF291052 | Zea mays subsp. parviglumis |
| AAF44664.1 | AF236080 | Zea mays |
| AAC49884.1 | U76031 | Oryza sativa |
| AAC49881.1 | U76028 | Oryza sativa |
| AAK07676.1 | AY026343 | Lycopersicon esculentum |
| AAG01375.1 | AY005818 | Zea mays subsp. mays |
| AAC49882.1 | U76029 | Oryza sativa |
| AAÇ49883.1 | U76030 | Oryza sativa |
| AAG22831.1 | AF309562 | Ceratodon purpureus |
| AAF66104.1 | AF218049 | Physcomitrella patens |

Medicago sativa
Trema tomentosa
Trema orientalis
Parasponia andersonii
Trema virgata
Trema virgata
Casuarina glauca
Trema orientalis
Trema virgata
Trema virgata
Glycine max
Hordeum vulgare
Zea mays subsp. parvig
Zea mays
Oryza sativa
Oryza sativa
Lycopersicon esculentum
Zea mays subsp. mays
Oryza sativa
Oryza sativa
Ceratodon purpureus
Physcomitrella patens

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| SEQ ID NO. 1539 | |
| AAG29748.1 | AF172172 |
| CAA68405.1 | Y00296 |
| AAC28426.1 | AF027215 |
| AAB86653.1 | U27194 |
| CAB63706.1 | AJ131349 |
| CAB63709.1 | AJ131352 |
| CAA37898.1 | X53950 |
| CAB16751.1 | Z99635 |
| CAB63707.1 | AJ131350 |
| CAB63708.1 | AJ131351 |
| AAA97887.1 | U47143 |
| AAB70097.1 | U94968 |
| AAG01183.1 | AF291052 |
| AAE44664.1 | AF236080 |
| AAC49884.1 | U76031 |
| AAC49881.1 | U76028 |
| AAK07676.1 | AY026343 |
| AAG01375.1 | AY005818 |
| AAC49882.1 | U76029 |
| AAE49883.1 | U76030 |
| AAG22831.1 | AF309562 |
| AAE66104.1 | AF218049 |

Oryza sativa
Lophopyrum elongatum
Lophopyrum elongatum
Oryza sativa
Brassica oleracea
Brassica rapa
Brassica oleracea

Lycopersicon esculentum
Oryza sativa
Lycopersicon esculentum
Potamogeton crispus

Pisum sativum
Solanium tuberosum
Zea mays
Plastid Mesembryanthemum

Pisum sativum
Plastid Mesembryanthemum

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| BAA92953.1 | AF001551 |
| AAF43496.1 | AF131222 |
| AAK11674.1 | AF339747 |
| BAA94516.1 | AF001800 |
| CAB41878.1 | Y18259 |
| BAA23676.1 | AB000970 |
| CAB41879.1 | Y18260 |
| SEQ ID NO. 1537 | |
| AAD25300.1 | AF088276 |
| CAA63704.1 | X93301 |
| AAD24966.1 | AF109150 |
| AAD25225.1 | AF088279 |
| SEQ ID NO. 1538 | |
| AAC08525.1 | AF020814 |
| AAC08526.1 | AF020816 |
| AAC08524.1 | AF020813 |
| AAF86908.1 | AF223360 |
| crystallinum | |
| CAA48210.1 | X68077 |
| AAF86906.1 | AF223358 |
| crystallinum | |

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|-----------------|----------|-------------------------------|-----------------|----------|-------------------------------|
| AAK14807.1 | AY026342 | Physcomitrella patens | AAC49188.2 | U29333 | Pisum sativum |
| CAA07547.1 | AJ007507 | Cichorium intybus x Cichorium | AAG44132.1 | AF218296 | Pisum sativum |
| endivia | | | CAA65580.1 | X96784 | Nicotiana tabacum |
| AAA33018.1 | L28826 | Casuarina glauca | BAA12159.1 | D83968 | Glycine max |
| AAA03005.1 | M23313 | Sesbania rostrata | AAD56282.1 | AF155332 | Petunia x hybrida |
| BAA31155.1 | AB015719 | Pisum sativum | CAA64635.1 | X95342 | Nicotiana tabacum |
| BAA31157.1 | AB015721 | Pisum sativum | AAD38930.1 | AF135485 | Glycine max |
| AAB48005.1 | M91077 | Medicago sativa | AAB94590.1 | AF022461 | Glycine max |
| CAA40900.1 | X57733 | Medicago truncatula | CAB56742.1 | AJ249800 | Cicer arietinum |
| BAA31156.1 | AB015720 | Pisum sativum | BAA13076.1 | D86351 | Glycine max |
| CAA32492.1 | X14311 | Medicago sativa | AAC39454.1 | AF014802 | Eschscholzia californica |
| AAA32657.1 | M36100 | Medicago sativa | BAA74466.1 | AB022733 | Glycyrrhiza echinata |
| BAA24088.1 | AB009844 | Pisum sativum | BAA22423.1 | AB001380 | Glycyrrhiza echinata |
| CAA31750.1 | X13375 | Medicago sativa | CAA70575.1 | Y09423 | Nepeta racemosa |
| CAA90870.1 | Z54159 | Vicia faba | CAA50648.1 | X71657 | Solanum melongena |
| AAA18503.1 | U09671 | Canavalia lineata | AAB94587.1 | AF022458 | Glycine max |
| CAA90869.1 | Z54158 | Vicia faba | BAA84072.1 | AB028152 | Torenia hybrida |
| CAA90868.1 | Z54157 | Vicia faba | AAC32274.1 | AF081575 | Petunia x hybrida |
| CAA31859.1 | X13505 | Sesbania rostrata | BAA92894.1 | AB006790 | Petunia x hybrida |
| CAA32044.1 | X13815 | Sesbania rostrata | | | |
| CAA38024.1 | X54089 | Medicago sativa | | | |
| AAA03002.1 | M23312 | Sesbania rostrata | | | |
| SEQ ID NO. 1540 | | | SEQ ID NO. 1542 | | |
| AAB65776.1 | U97521 | Vitis vinifera | AAB63814.1 | L46848 | Glycine max |
| AAB65777.1 | U97522 | Vitis vinifera | AAF34767.1 | AF227622 | Euphorbia esula |
| BAA03751.1 | D16223 | Oryza sativa | BAA04668.1 | D21130 | Oryza sativa |
| CAA30142.1 | X07130 | Solanum tuberosum | CAA63786.1 | X93587 | Lupinus luteus |
| BAA03749.1 | D16221 | Oryza sativa | CAA69256.1 | Y07959 | Zea mays |
| SEQ ID NO. 1541 | | | SEQ ID NO. 1544 | | |
| CAB43505.1 | AJ239051 | Cicer arietinum | AAB84222.1 | AF030301 | Helianthus annuus |
| BAA93634.1 | AB025016 | Lotus japonicus | CAA39708.1 | X56267 | Nicotiana tabacum |
| CAB41490.1 | AJ238439 | Cicer arietinum | | | |
| CAA10067.1 | AJ012581 | Cicer arietinum | | | |
| BAA22422.1 | AB001379 | Glycyrrhiza echinata | | | |
| BAA74465.1 | AB022732 | Glycyrrhiza echinata | | | |
| CAA04117.1 | AJ000478 | Helianthus tuberosus | | | |
| CAA04116.1 | AJ000477 | Helianthus tuberosus | | | |
| AAA32913.1 | M32885 | Persea americana | | | |
| AAG09208.1 | AF175278 | Pisum sativum | | | |
| | | | SEQ ID NO. 1547 | | |
| | | | AAC36697.1 | AF075579 | Mesembryanthemum crystallinum |
| | | | CAC10358.1 | AJ277086 | Nicotiana tabacum |
| | | | CAB90633.1 | AJ277743 | Fagus sylvatica |
| | | | CAC10359.1 | AJ277087 | Nicotiana tabacum |
| | | | AAD17804.1 | AF092431 | Lotus japonicus |
| | | | CAC09575.1 | AJ298987 | Fagus sylvatica |
| | | | CAA72341.1 | Y11607 | Medicago sativa |
| | | | AAD17805.1 | AF092432 | Lotus japonicus |
| | | | AAC36698.1 | AF075580 | Mesembryanthemum crystallinum |

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|-----------------|----------|-------------------------------|-----------------|----------|----------------------------|
| AAC36699.1 | AF075581 | Mesembryanthemum crystallinum | CAA66037.1 | X97351 | Populus balsamifera subsp. |
| AAG43835.1 | AF213455 | Zea mays | trichocarpa | | |
| AAC36700.1 | AF075582 | Mesembryanthemum crystallinum | BAA01877.1 | D11102 | Populus kitakamiensis |
| AAD11430.1 | AF097667 | Mesembryanthemum crystallinum | CAAG2227.1 | X90694 | Medicago sativa |
| AAC35951.1 | AF079355 | Mesembryanthemum crystallinum | BAA07241.1 | D38051 | Populus kitakamiensis |
| CAB90634.1 | AJ277744 | Fagus sylvatica | BAA01950.1 | D11337 | Vigna angularis |
| AAB93832.1 | U81960 | Zea mays | AAE5464.2 | AF247700 | Oryza sativa |
| AAC26828.1 | AF075603 | Oryza sativa | AAE53027.1 | AF244924 | Spinacia oleracea |
| CAC09576.1 | AJ298988 | Fagus sylvatica | CAC21393.1 | AJ401276 | Zea mays |
| | | | CAA59487.1 | X85230 | Triticum aestivum |
| | | | AAD37430.1 | AF149280 | Phaseolus vulgaris |
| SEQ ID NO. 1548 | | | CAA71491.1 | Y10465 | Spinacia oleracea |
| CAR09881.1 | AJ011939 | Trifolium repens | AAB41811.1 | L36157 | Medicago sativa |
| CAA62228.1 | X90695 | Medicago sativa | BAA03644.1 | D14997 | Oryza sativa |
| CAA71495.1 | Y10469 | Spinacia oleracea | AAA32676.1 | M37637 | Arachis hypogaea |
| AAB41812.1 | L36158 | Medicago sativa | CAA71494.1 | Y10468 | Spinacia oleracea |
| BAA77387.1 | AB024437 | Scutellaria baicalensis | AAA34050.1 | M74103 | Nicotiana sylvestris |
| AAF63024.1 | AF244921 | Spinacia oleracea | CAA40796.1 | X57564 | Armoracia rusticana |
| AAD11483.1 | U51193 | Glycine max | | | |
| AAB67737.1 | L77080 | Stylosanthes humilis | | | |
| BAA07663.1 | D42064 | Nicotiana tabacum | | | |
| BAA07664.1 | D42065 | Nicotiana tabacum | | | |
| CAB94692.1 | AJ242742 | Ipomoea batatas | | | |
| CAB67121.1 | Y19023 | Lycopersicon esculentum | SEQ ID NO. 1549 | | |
| CAA62226.1 | X90693 | Medicago sativa | CAA76374.2 | Y16776 | Spinacia oleracea |
| CAA50597.1 | X71593 | Lycopersicon esculentum | AAD11482.1 | U51192 | Glycine max |
| AAD11481.1 | U51191 | Glycine max | AAD11481.1 | U51191 | Glycine max |
| AAD11484.1 | U51194 | Glycine max | BAA07663.1 | D42064 | Nicotiana tabacum |
| BAA82306.1 | AB027752 | Nicotiana tabacum | AAA65637.1 | L13654 | Lycopersicon esculentum |
| AAA65637.1 | L13654 | Lycopersicon esculentum | AAA65636.1 | L13653 | Lycopersicon esculentum |
| AAD11482.1 | U51192 | Glycine max | BAA07664.1 | D42065 | Nicotiana tabacum |
| CAA62225.1 | X90692 | Medicago sativa | BAA03644.1 | D14997 | Oryza sativa |
| AAC98519.1 | AF007211 | Glycine max | AAA32676.1 | M37637 | Arachis hypogaea |
| AAD37427.1 | AF149277 | Phaseolus vulgaris | CAA80502.1 | Z22920 | Spirodela polyrrhiza |
| BAA14144.1 | D90116 | Armoracia rusticana | AAB67737.1 | L77080 | Stylosanthes humilis |
| AAA98491.1 | L36981 | Petroselinum crispum | BAA82307.1 | AB027753 | Nicotiana tabacum |
| CAA71488.1 | Y10462 | Spinacia oleracea | CAA64413.1 | X94943 | Lycopersicon esculentum |
| AAD43561.1 | AF155124 | Gossypium hirsutum | AAD11484.1 | U51194 | Glycine max |
| BAA14143.1 | D90115 | Armoracia rusticana | AAF63024.1 | AF244921 | Spinacia oleracea |
| CAA71490.1 | Y10464 | Spinacia oleracea | AAD11483.1 | U51193 | Glycine max |
| AAB02554.1 | L37790 | Stylosanthes humilis | CAA71494.1 | Y10468 | Spinacia oleracea |
| | | | AAD37429.2 | AF149279 | Phaseolus vulgaris |
| | | | BAA92500.1 | AP001383 | Oryza sativa |
| | | | AAC98519.1 | AF007211 | Glycine max |
| | | | CAB67121.1 | Y19023 | Lycopersicon esculentum |

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| CAA59010.1 | X84228 | Beta vulgaris | CAA67600.1 | X99210 | Lycopersicon esculentum |
| CAA59008.1 | X84226 | Nicotiana tabacum | CAA64614.1 | X95296 | Lycopersicon esculentum |
| CAA52976.1 | X75082 | Solanum tuberosum | AAF22256.1 | AF161711 | Pimpinella brachycarpa |
| BAA82390.1 | AP000367 | Oryza sativa | BAA88222.1 | AB028650 | Nicotiana tabacum |
| CAA59009.1 | X84227 | Populus x generosa | CAA67575.1 | X99134 | Lycopersicon esculentum |
| | | | CAA78387.1 | Z13997 | Petunia x hybrida |
| | | | CAA66952.1 | X98308 | Lycopersicon esculentum |
| SEQ ID NO. 1555 | | | AAB41101.1 | U72762 | Nicotiana tabacum |
| AAF67052.1 | AF190303 | Adiantum raddianum | AAA33500.1 | M73028 | Zea mays |
| AAG08959.1 | AF122051 | Solanum tuberosum | AAG36774.1 | AF210616 | Zea mays |
| AAF67053.1 | AF190304 | Adiantum raddianum | BAA88223.1 | AB028651 | Nicotiana tabacum |
| AAF67050.1 | AF190301 | Secale cereale | BAA88224.1 | AB028652 | Nicotiana tabacum |
| AAF67051.1 | AF190302 | Secale cereale | BAA88221.1 | AB028649 | Nicotiana tabacum |
| AAG08961.1 | AF122053 | Solanum tuberosum | | | |
| AAG08960.1 | AF122052 | Solanum tuberosum | SEQ ID NO. 1557 | | |
| BAA81731.1 | AB029160 | Glycine max | BAA03763.1 | D16247 | Nicotiana sylvestris |
| BAA81730.1 | AB029159 | Glycine max | AAF40306.1 | AF156667 | Vigna radiata |
| CAA72217.1 | Y11414 | Oryza sativa | AAF75791.1 | AF271892 | Pisum sativum |
| BAA81732.1 | AB029161 | Glycine max | CAA68193.1 | X99937 | Spinacia oleracea |
| CAA64615.1 | X95297 | Lycopersicon esculentum | AAD20980.1 | AF079782 | Zea mays |
| AAG08962.1 | AF122054 | Solanum tuberosum | BAA95705.1 | AB042644 | Oryza sativa |
| BAA88223.1 | AB028651 | Nicotiana tabacum | BAA95704.1 | AB042643 | Oryza sativa |
| CAA78387.1 | Z13997 | Petunia x hybrida | AAG48833.1 | AC084218 | Oryza sativa |
| AAB41101.1 | U72762 | Nicotiana tabacum | | | |
| BAB40790.1 | AB058642 | Lilium hybrid division I | SEQ ID NO. 1559 | | |
| BAG13574.1 | AC037425 | Oryza sativa | BAA83689.1 | AB011968 | Oryza sativa |
| BAA88221.1 | AB028649 | Nicotiana tabacum | BAA83688.1 | AB011967 | Oryza sativa |
| CAA72185.1 | Y11350 | Oryza sativa | AAF22219.1 | AF141378 | Zea mays |
| BAA88224.1 | AB028652 | Nicotiana tabacum | BAA34675.1 | AB011670 | Triticum aestivum |
| BAA88222.1 | AB028650 | Nicotiana tabacum | CAA73068.1 | Y12465 | Sorghum bicolor |
| BAA81733.2 | AB029162 | Glycine max | CAA73067.1 | Y12464 | Sorghum bicolor |
| CAA71992.1 | Y11105 | Pisum sativum | AAB62693.1 | AF004947 | Oryza sativa |
| AAK19618.1 | AF336285 | Gossypium hirsutum | BAA96628.1 | AP002482 | Oryza sativa |
| AAK19611.1 | AF336278 | Gossypium hirsutum | AAD23582.1 | AF128443 | Glycine max |
| AAF34434.1 | AF172282 | Oryza sativa | BAA05649.1 | D26602 | Nicotiana tabacum |
| CAA67575.1 | X99134 | Lycopersicon esculentum | CAA71142.1 | Y10036 | Cucumis sativus |
| AAK08983.1 | AY026332 | Oryza sativa | AAC99329.1 | AF062479 | Oryza sativa |
| AAK19615.1 | AF336282 | Gossypium hirsutum | CAA65244.1 | X95997 | Solanum tuberosum |
| SEQ ID NO. 1556 | | | CAA57898.1 | X82548 | Hordeum vulgare |
| CAA78386.1 | Z13996 | Petunia x hybrida | CAA07813.1 | AJ007990 | Hordeum vulgare |
| CAB43399.1 | AJ006292 | Antirrhinum majus | CAA46556.1 | X65606 | Hordeum vulgare |

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| AAB05457.1 | U55768 | Oryza sativa | CRA54045.1 | X76535 | Solanum tuberosum |
| CAA46554.1 | X65604 | Hordeum vulgare | AAB84202.2 | AF029256 | Kosteletzkyia virginica |
| AAD00239.1 | U73938 | Nicotiana tabacum | CAA47275.1 | X66737 | Nicotiana plumbaginifolia |
| AAD00240.1 | U73939 | Nicotiana tabacum | BAA37150.1 | AB022442 | Vicia faba |
| BAA13608.1 | D88399 | Oryza sativa | BAA08134.1 | D45189 | Zostera marina |
| AAG60195.1 | AC084763 | Oryza sativa | CAB69824.1 | AJ271439 | Prunus persica |
| BAA19573.1 | AB002109 | Oryza sativa | CAB69823.1 | AJ271438 | Prunus persica |
| AAB68962.1 | L38855 | Glycine max | AAB35314.2 | S79323 | Vicia faba |
| AAB58348.1 | U29095 | Triticum aestivum | CAB85495.1 | AJ132892 | Medicago truncatula |
| AAF27340.1 | AF186020 | Vicia faba | CAB85494.1 | AJ132891 | Medicago truncatula |
| AAA96325.1 | M94726 | Triticum aestivum | AAA34173.1 | M60166 | Lycopersicon esculentum |
| CAAB1443.1 | Z26846 | Mesembryanthemum crystallinum | CAC29436.1 | AJ310524 | Vicia faba |
| CAA06503.1 | AJ005373 | Craterostigma plantagineum | AAAB34098.1 | M80490 | Nicotiana plumbaginifolia |
| AAF21062.1 | AF216527 | Dunaliella tertiolecta | AAB50276.1 | U09989 | Zea mays |
| CAA89202.1 | Z49233 | Chlamydomonas eugametos | AAAB34094.1 | M80489 | Nicotiana plumbaginifolia |
| | | | AAAB34052.1 | M27888 | Nicotiana plumbaginifolia |
| SEQ ID NO. 1565 | | | CAA59799.1 | X85804 | Phaseolus vulgaris |
| BAA90357.1 | AP001080 | Oryza sativa | AAF98344.1 | AF275745 | Lycopersicon esculentum |
| BAA85438.1 | AP000616 | Oryza sativa | AAD55399.1 | AF179442 | Lycopersicon esculentum |
| BAA78746.1 | AB023482 | Oryza sativa | BAA06629.1 | D31843 | Oryza sativa |
| AAG43550.1 | AF211532 | Nicotiana tabacum | CAA54046.1 | X76536 | Solanum tuberosum |
| BAA96875.1 | AB045121 | Oryza sativa | CAC29435.1 | AJ310523 | Vicia faba |
| | | | AAD46187.1 | AF156683 | Nicotiana plumbaginifolia |
| SEQ ID NO. 1570 | | | CAA52107.1 | X73901 | Dunaliella bioculata |
| CAA68234.1 | X99972 | Brassica oleracea | AAB49042.1 | U54690 | Dunaliella acidophila |
| AAG28435.1 | AF195028 | Glycine max | AAK31799.1 | AY029190 | Lilium longiflorum |
| AAG28436.1 | AF195029 | Glycine max | AAD29712.1 | AF140499 | Oryza sativa |
| AAD31896.1 | AF145478 | Mesembryanthemum crystallinum | AAA01348.1 | U38965 | Vicia faba |
| CAA63790.1 | X93592 | Dunaliella bioculata | AAK32118.1 | AF308816 | Hordeum vulgare |
| BAA90510.2 | AP001111 | Oryza sativa | AAF97591.1 | AF263917 | Lycopersicon esculentum |
| AAD11617.1 | AF050495 | Lycopersicon esculentum | AAA34099.1 | M80491 | Nicotiana plumbaginifolia |
| AAA34138.1 | M96324 | Lycopersicon esculentum | AAK32119.1 | AF308817 | Hordeum vulgare |
| AAD11618.1 | AF050496 | Lycopersicon esculentum | | | |
| AAF73985.1 | AF096871 | Zea mays | SEQ ID NO. 1571 | | |
| AAB58910.1 | U82966 | Oryza sativa | AAA34236.1 | M94863 | Vigna radiata |
| AAD46188.1 | AF156691 | Nicotiana plumbaginifolia | CAA81749.1 | Z27235 | Solanum tuberosum |
| CAA59800.1 | X85805 | Zea mays | AAF22108.1 | AF119410 | Lupinus albus |
| AAB17186.1 | U72148 | Lycopersicon esculentum | AAF22112.1 | AF119414 | Lupinus albus |
| BAA01058.1 | D10207 | Oryza sativa | BAA76388.1 | AB007639 | Pyrus pyrifolia |
| AAD46186.1 | AF156679 | Nicotiana plumbaginifolia | CAB01401.1 | Z77854 | Phalaenopsis sp. |
| AAB41898.1 | U84891 | Mesembryanthemum crystallinum | CAB86187.1 | AJ277161 | Carica papaya |

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| AA05849.1 | L07883 | Doritaenopsis sp. | CAA40057.1 | X56733 | Trifolium repens |
| AA05848.1 | L07882 | Doritaenopsis sp. | CAA40058.1 | X56734 | Trifolium repens |
| BAA31137.1 | AB007449 | Actinidia deliciosa | CAA55196.1 | X78433 | Avena sativa |
| CAA81747.1 | Z27233 | Solanum tuberosum | CAA79989.2 | Z21977 | Brassica napus |
| AA028181.1 | AF109927 | Musa acuminata | AA071381.1 | U95298 | Manihot esculenta |
| CAA81748.1 | Z27234 | Solanum tuberosum | CAA57913.1 | X82577 | Brassica napus |
| AA031571.1 | AF080258 | Musa acuminata | AA038784.1 | U72154 | Brassica nigra |
| BAA96743.1 | AB044662 | Prunus persica | AAA84906.1 | U28047 | Oryza sativa |
| AA022099.2 | AF129508 | Musa acuminata | CAC08209.1 | AJ005950 | Cicer arietinum |
| BAA94600.1 | AB033503 | Populus euramericana | SEQ ID NO. 1573 | | |
| BAA35057.1 | AB010102 | Malus x domestica | AA016138.1 | AF096298 | Nicotiana tabacum |
| BAA33859.1 | AB018355 | Vigna radiata | BAA77383.1 | AB020590 | Nicotiana tabacum |
| AAA03472.1 | U03294 | Malus sylvestris | BAA86031.1 | AB026890 | Nicotiana tabacum |
| BAA19161.1 | AB000679 | Vigna radiata | BAA82107.1 | AB022693 | Nicotiana tabacum |
| AAA78789.1 | L34171 | Lycopersicon esculentum | AA016139.1 | AF096299 | Nicotiana tabacum |
| AA005145.1 | AF049711 | Petunia x hybrida | AA055974.1 | AF121353 | Petroselinum crispum |
| BAA00839.1 | D01033 | Cucurbita maxima | AA023898.1 | AF193802 | Oryza sativa |
| CAA60591.1 | X87112 | Pyrus communis | BAB16432.1 | AB041520 | Nicotiana tabacum |
| SEQ ID NO. 1572 | | | | | |
| AA07429.1 | AF321287 | Musa acuminata | BAA87058.1 | AB028022 | Nicotiana tabacum |
| AA069619.1 | AF072736 | Pinus contorta | AA035658.1 | AF204925 | Petroselinum crispum |
| AA04007.1 | AF163097 | Dalbergia cochinchinensis | AA027591.1 | AF121354 | Petroselinum crispum |
| BAA78708.1 | AB003089 | Polygonum tinctorium | AA061863.1 | AF193770 | Nicotiana tabacum |
| AA091166.1 | U39228 | Prunus avium | AA035659.1 | AF204926 | Petroselinum crispum |
| BAA11831.1 | D83177 | Costus speciosus | AA061864.1 | AF193771 | Nicotiana tabacum |
| AA034650.1 | AF221526 | Prunus serotina | SEQ ID NO. 1574 | | |
| AA025897.1 | AF170087 | Cucurbita pepo | AA01600.1 | AF016713 | Lycopersicon esculentum |
| AA000614.1 | AF293849 | Secale cereale | AA020002.1 | AF213936 | Prunus dulcis |
| AA022162.1 | S35175 | Manihot esculenta | AA032034.1 | AF023472 | Hordeum vulgare |
| AA03675.1 | AF149311 | Rauvolfia serpentina | AA07875.1 | AF140606 | Oryza sativa |
| AA087339.1 | L41869 | Hordeum vulgare | CAC07206.1 | AJ278966 | Brassica napus |
| AA049177.1 | U33817 | Sorghum bicolor | AA016016.1 | AF080545 | Nepenthes alata |
| CAA64442.1 | X94986 | Manihot esculenta | AA069642.1 | AF000392 | Lotus japonicus |
| AA020839.1 | AF082991 | Avena sativa | CAA93316.1 | Z69370 | Cucumis sativus |
| AA009850.1 | U44087 | Zea mays | BAB19757.1 | AB052785 | Glycine max |
| AA010503.1 | U33816 | Zea mays | BAB19760.1 | AB052788 | Glycine max |
| AA003266.1 | U44773 | Zea mays | BAB19756.1 | AB052784 | Glycine max |
| AA065946.1 | U25157 | Zea mays | AA042860.1 | AF154930 | Prunus dulcis |
| CAA52293.1 | X74217 | Zea mays | SEQ ID NO. 1576 | | |
| AA028800.1 | AF112888 | Catharanthus roseus | | | |

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| AAF61647.1 | AAF190634 | Nicotiana tabacum | AA34002.1 | M67449 | Glycine max |
| BAA89009.1 | AB027455 | Petunia x hybrida | CAC09580.1 | AJ298992 | Fagus sylvatica |
| BAA93039.1 | AB033758 | Citrus unshiu | AAK11734.1 | AY027437 | Arachis hypogaea |
| BAA36423.1 | AB013598 | Verbena x hybrida | AAF34436.1 | AF172282 | Oryza sativa |
| BAA36421.1 | AB013596 | Perilla frutescens | AAF66615.1 | AF142596 | Nicotiana tabacum |
| AAF98390.1 | AF287143 | Brassica napus | CAA08995.1 | AJ010091 | Brassica napus |
| BAA36422.1 | AB013597 | Perilla frutescens | BAA06538.1 | D31737 | Nicotiana tabacum |
| AAD21086.1 | AF127218 | Forsythia x intermedia | AAK11674.1 | AF339747 | Lophopyrum elongatum |
| BAA12737.1 | D85186 | Gentiana triflora | BAA05648.1 | D26601 | Nicotiana tabacum |
| CAA59450.1 | X85138 | Lycopersicon esculentum | AAF43496.1 | AF131222 | Lophopyrum elongatum |
| AAF17077.1 | AF199453 | Sorghum bicolor | AAK21965.1 | AY028699 | Brassica napus |
| BAA89008.1 | AB027454 | Petunia x hybrida | RAA09771.1 | U67422 | Zea mays |
| AA881683.1 | AF000372 | Vitis vinifera | AAF76189.1 | AF271206 | Rosa hybrid cultivar |
| BAB41017.1 | AB047090 | Vitis labrusca x Vitis vinifera | AAF59905.1 | AF197946 | Glycine max |
| AA881682.1 | AF000371 | Vitis vinifera | AAF78021.1 | AF238477 | Oryza sativa |
| BAB41022.1 | AB047095 | Vitis vinifera | AAF91323.1 | AF244889 | Glycine max |
| BAB41020.1 | AB047093 | Vitis vinifera | CAB51834.1 | 00069 | Oryza sativa |
| BAB41021.1 | AB047094 | Vitis vinifera | AAD46916.1 | AF164020 | Oryza sativa |
| BAB41019.1 | AB047092 | Vitis vinifera | CAA08997.1 | AJ010093 | Brassica napus |
| BAA83484.1 | AB031274 | Scutellaria baicalensis | AAF91322.1 | AF244888 | Glycine max |
| BAB41025.1 | AB047098 | Vitis vinifera | CAA61510.1 | X89226 | Oryza sativa |
| BAB41023.1 | AB047096 | Vitis vinifera | AAF59906.1 | AF197947 | Glycine max |
| BAA90787.1 | AB038248 | Ipomoea batatas | AAF91324.1 | AF244890 | Glycine max |
| BAA19659.1 | AB002818 | Perilla frutescens | SEQ ID NO. 1578 | | |
| BAB41018.1 | AB047091 | Vitis labrusca x Vitis vinifera | BAA24448.1 | AB003516 | Panax ginseng |
| AA836652.1 | U32643 | Nicotiana tabacum | CAA06770.1 | AJ005928 | Brassica napus |
| AAK28304.1 | AF346432 | Nicotiana tabacum | CAA06773.1 | AJ005931 | Brassica napus |
| BAB41024.1 | AB047097 | Vitis vinifera | CAA06223.1 | AJ004923 | Lycopersicon esculentum |
| BAB41026.1 | AB047099 | Vitis vinifera | SEQ ID NO. 1579 | | |
| CAA31855.1 | X13500 | Zea mays | AAC60566.1 | S68113 | Brassica napus |
| AA886473.1 | AF028237 | Ipomoea purpurea | AAD01800.1 | AF026382 | Fragaria x ananassa |
| CAA54614.1 | X77464 | Manihot esculenta | CAA59472.1 | X85206 | Catharanthus roseus |
| SEQ ID NO. 1577 | | | BAB16431.1 | AB041519 | Nicotiana tabacum |
| AAG31141.1 | AF305911 | Oryza sativa | BAB16428.1 | AB041516 | Nicotiana tabacum |
| AAG31142.1 | AF305912 | Hordeum vulgare | BAA99575.1 | AB037109 | Daucus carota |
| CAA06334.1 | AJ005077 | Lycopersicon esculentum | BAA95941.1 | AB035125 | Nicotiana tabacum |
| AAD46406.1 | AF096250 | Lycopersicon esculentum | AAC49369.1 | U34333 | Phaseolus vulgaris |
| AAD10057.1 | AF110519 | Lycopersicon esculentum | AAF78903.1 | AF248055 | Glycine max |
| AAD10056.1 | AF110518 | Lycopersicon esculentum | BAA13150.1 | D86629 | Nicotiana tabacum |
| AAK30005.1 | AY029067 | Rosa hybrid cultivar | | | |

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| BAA13155.1 | D86721 | Nicotiana tabacum | CAA47717.1 | X67304 | Glycine max |
| CAA42959.1 | X60432 | Zea mays | AAB81595.1 | AF019614 | Solanum tuberosum |
| AAB18205.1 | U73214 | Triticum aestivum | CAA64766.1 | X95513 | Solanum tuberosum |
| CAA57810.1 | X82413 | Asparagus officinalis | AAB31252.1 | S73865 | Solanum tuberosum |
| CAA40361.1 | X57076 | Lycopersicon esculentum | AA53184.1 | U09026 | Lycopersicon esculentum |
| CAA43666.1 | X61395 | Lycopersicon esculentum | AAB65766.1 | U37839 | Lycopersicon esculentum |
| AAD03487.1 | AF028841 | Medicago sativa | CAA65268.1 | X96405 | Solanum tuberosum |
| AAA33132.1 | L20755 | Cuscuta reflexa | AAF15296.2 | AF204210 | Phaseolus vulgaris |
| | | | CAA55319.1 | X78581 | Pisum sativum |
| | | | AAA03728.1 | U04526 | Glycine max |
| SEQ ID NO. 1583 | | Lycopersicon esculentum | CAA34906.1 | X17061 | Pisum sativum |
| CAA49599.1 | X69979 | | CAA55318.1 | X78580 | Pisum sativum |
| | | | BAA03042.1 | D13949 | Glycine max |
| SEQ ID NO. 1584 | | Oryza sativa | AAA33987.1 | J03211 | Glycine max |
| BAA88198.1 | AP000837 | Oryza sativa | AAB71759.1 | U84198 | Pisum sativum |
| BAA88195.1 | AP000837 | | AAB41272.1 | U50081 | Glycine max |
| | | | CAA39604.1 | X56139 | Glycine max |
| SEQ ID NO. 1585 | | Lycopersicon esculentum | AAA96817.1 | U26457 | Glycine max |
| AAD28506.1 | AF123265 | Solanum tuberosum | AAG42354.1 | AF234983 | Phaseolus vulgaris |
| AAB49425.1 | U72489 | Lycopersicon esculentum | AAG18376.1 | AF283894 | Zantedeschia aethiopica |
| AAD28507.2 | AF123266 | | AAD39093.1 | AF095895 | Oryza sativa |
| | | | CAC04380.1 | AJ293015 | Pisum sativum |
| SEQ ID NO. 1588 | | Solanum tuberosum | CAA45088.1 | X63525 | Phaseolus vulgaris |
| CAA65269.1 | X96406 | Lycopersicon esculentum | AAB18970.2 | U76687 | Phaseolus vulgaris |
| AAB65767.1 | U37840 | Oryza sativa | AAC49159.1 | U36191 | Glycine max |
| BAA03102.1 | D14000 | Hordeum vulgare | AAA03726.1 | U04785 | Glycine max |
| AAC12951.1 | U56406 | Prunus dulcis | CAA45086.1 | X63521 | Phaseolus vulgaris |
| CAB94852.1 | AJ404331 | Lycopersicon esculentum | | | |
| AAG21691.1 | AY008278 | Cucumis sativus | SEQ ID NO. 1589 | | |
| AA79186.1 | U36339 | Solanum tuberosum | CAB39890.1 | AJ237582 | Armoracia rusticana |
| AAB67858.1 | U60200 | Solanum tuberosum | CAB39158.1 | AJ132906 | Brassica napus |
| CAA64765.1 | X95512 | Cucumis sativus | CAB39159.1 | AJ132905 | Brassica rapa |
| CAB33038.1 | AJ271161 | Nicotiana tabacum | CAB39172.1 | AJ132903 | Raphanus sativus |
| CAA58859.1 | X84040 | Solanum tuberosum | CAB39892.1 | AJ237584 | Capsella bursa-pastoris |
| AAB67865.1 | U60202 | Solanum tuberosum | | | |
| CAA55724.1 | X79107 | Solanum tuberosum | SEQ ID NO. 1590 | | |
| AAB67860.1 | U60201 | Solanum tuberosum | AAK19616.1 | AF336283 | Gossypium hirsutum |
| CAB65460.1 | Y18548 | Solanum tuberosum | CAA78386.1 | Z13996 | Petunia x hybrida |
| AAD04258.1 | AF039651 | Solanum tuberosum | CAA72218.1 | Y11415 | Oryza sativa |
| AAB81594.1 | AF019613 | Solanum tuberosum | CAB43399.1 | AJ006292 | Antirrhinum majus |
| AAA33986.1 | J02795 | Glycine max | AAK19619.1 | AF336286 | Gossypium hirsutum |
| AAB67732.1 | U50075 | Glycine max | | | |

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| CAA50224.1 | X70879 | Hordeum vulgare | AAD11617.1 | AF050495 | Lycopersicon esculentum |
| CAA50222.1 | X70877 | Hordeum vulgare | AAA34138.1 | M96324 | Lycopersicon esculentum |
| BAA23337.1 | D88617 | Oryza sativa | AAD11618.1 | AF050496 | Lycopersicon esculentum |
| CAA64614.1 | X95296 | Lycopersicon esculentum | BAA90510.2 | AF001111 | Oryza sativa |
| CAA50221.1 | X70876 | Hordeum vulgare | AAF73985.1 | AF096871 | Zea mays |
| AAK19611.1 | AF336278 | Gossypium hirsutum | AAB58910.1 | U82966 | Oryza sativa |
| BAA81732.1 | AB029161 | Glycine max | CAB69823.1 | AJ271438 | Prunus persica |
| BAA81731.1 | AB029160 | Glycine max | CAC29436.1 | AJ310524 | Vicia faba |
| BAA81730.1 | AB029159 | Glycine max | AAD46188.1 | AF156691 | Nicotiana plumbaginifolia |
| CAA72185.1 | Y11350 | Oryza sativa | AAD46186.1 | AF156679 | Nicotiana plumbaginifolia |
| ARG13574.1 | AC037425 | Oryza sativa | CAA47275.1 | X66737 | Nicotiana plumbaginifolia |
| BAA81733.2 | AB029162 | Glycine max | AAB17186.1 | U72148 | Lycopersicon esculentum |
| BAA88221.1 | AB028649 | Nicotiana tabacum | AAD29712.1 | AF140499 | Oryza sativa |
| CAA78387.1 | Z13997 | Petunia x hybrida | CAA59800.1 | X85805 | Zea mays |
| BAA88224.1 | AB028652 | Nicotiana tabacum | AAB35314.2 | S79323 | Vicia faba |
| BAA23338.1 | D88618 | Oryza sativa | AAA34173.1 | M60166 | Lycopersicon esculentum |
| AAK19617.1 | AF336284 | Gossypium hirsutum | CAA54045.1 | X76535 | Solanum tuberosum |
| CAA72217.1 | Y11414 | Oryza sativa | AAB60276.1 | U09989 | Zea mays |
| CAA67600.1 | X99210 | Lycopersicon esculentum | AAB84202.2 | AF029256 | Kosteletzkya virginica |
| AAK19615.1 | AF336282 | Gossypium hirsutum | AAA34098.1 | M80490 | Nicotiana plumbaginifolia |
| BAA81736.1 | AB029165 | Glycine max | CAA59799.1 | X85804 | Phaseolus vulgaris |
| BAA88222.1 | AB028650 | Nicotiana tabacum | AAB41898.1 | U84891 | Mesembryanthemum crystallinum |
| AAB41101.1 | U72762 | Nicotiana tabacum | AAD55399.1 | AF179442 | Lycopersicon esculentum |
| BAA88223.1 | AB028651 | Nicotiana tabacum | AAF98344.1 | AF275745 | Lycopersicon esculentum |
| AAK19618.1 | AF336285 | Gossypium hirsutum | CAA54046.1 | X76536 | Solanum tuberosum |
| CAA72186.1 | Y11351 | Oryza sativa | AAA34052.1 | M27888 | Nicotiana plumbaginifolia |
| CAA66952.1 | X98308 | Lycopersicon esculentum | CAB69824.1 | AJ271439 | Prunus persica |
| AAF22256.1 | AF161711 | Pimpinella brachycarpa | AAA34094.1 | M80489 | Nicotiana plumbaginifolia |
| CAA64615.1 | X95297 | Lycopersicon esculentum | BAA06629.1 | D31843 | Oryza sativa |
| CAA67575.1 | X99134 | Lycopersicon esculentum | AAB49042.1 | U54690 | Dunaliella acidophila |
| AAA19821.1 | L19495 | Zea mays | AAK31799.1 | AY029190 | Lilium longiflorum |
| CAA65525.1 | X96749 | Oryza sativa | CAC29435.1 | AJ310523 | Vicia faba |
| AAA33500.1 | M73028 | Zea mays | BAA37150.1 | AB022442 | Vicia faba |
| BAA23339.1 | D88619 | Oryza sativa | BAA01058.1 | D10207 | Oryza sativa |
| SEQ ID NO. 1594 | | | CAB85494.1 | AJ132891 | Medicago truncatula |
| AAG28435.1 | AF195028 | Glycine max | CAB85495.1 | AJ132892 | Medicago truncatula |
| AAG28436.1 | AF195029 | Glycine max | AAD46187.1 | AF156683 | Nicotiana plumbaginifolia |
| CAA68234.1 | X99972 | Brassica oleracea | BAA08134.1 | D45189 | Zostera marina |
| AAD31896.1 | AF145478 | Mesembryanthemum crystallinum | CAA52107.1 | X73901 | Dunaliella bioculata |
| CAA63790.1 | X93592 | Dunaliella bioculata | AAA34099.1 | M80491 | Nicotiana plumbaginifolia |
| | | | AAA20601.1 | U08985 | Zea mays |

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| AAA20600.1 | U08984 | Zea mays | BAA89584.1 | AP001073 | Oryza sativa |
| AAF97591.1 | AF263917 | Lycopersicon esculentum | AAD11481.1 | U51191 | Glycine max |
| AAA81348.1 | U38965 | Vicia faba | AAD11482.1 | U51192 | Glycine max |
| | | | BAA03644.1 | D14997 | Oryza sativa |
| | | | CAB67121.1 | Y19023 | Lycopersicon esculentum |
| SEQ ID NO. 1595 | | Mesembryanthemum crystallinum | CAA50597.1 | X71593 | Lycopersicon esculentum |
| AAC36697.1 | AF075579 | Nicotiana tabacum | AAA34108.1 | J02979 | Nicotiana tabacum |
| CAC10358.1 | AJ277086 | Fagus sylvatica | BAA06335.1 | D30653 | Populus kitakamiensis |
| CAB90633.1 | AJ277743 | Lotus japonicus | CAA40796.1 | X57564 | Armoracia rusticana |
| AAD17804.1 | AF092431 | Nicotiana tabacum | BAA94962.1 | AB042103 | Asparagus officinalis |
| CAC10359.1 | AJ277087 | Fagus sylvatica | BAA01992.1 | D11396 | Nicotiana tabacum |
| CAC09575.1 | AJ298987 | Medicago sativa | CAA66035.1 | X97349 | Populus balsamifera subsp. |
| CAA72341.1 | Y11607 | Lotus japonicus | trichocarpa | | |
| AAD17805.1 | AF092432 | Zea mays | CAC21393.1 | AJ401276 | Zea mays |
| AAG43835.1 | AF213455 | Mesembryanthemum crystallinum | BAA08499.1 | D49551 | Oryza sativa |
| AAC36698.1 | AF075580 | Mesembryanthemum crystallinum | BAA77387.1 | AB024437 | Scutellaria baicalensis |
| AAC36700.1 | AF075582 | Mesembryanthemum crystallinum | CAA59485.1 | X85228 | Triticum aestivum |
| AAC36699.1 | AF075581 | Mesembryanthemum crystallinum | BAA11853.1 | D83225 | Populus nigra |
| AAD11430.1 | AF097667 | Fagus sylvatica | BAA01877.1 | D11102 | Populus kitakamiensis |
| CAB90634.1 | AJ277744 | Mesembryanthemum crystallinum | BAA14144.1 | D90116 | Armoracia rusticana |
| AAC35951.1 | AF079355 | Zea mays | AAB47602.1 | L07554 | Linum usitatissimum |
| AB93832.1 | U81960 | Oryza sativa | BAA06334.1 | D30652 | Populus kitakamiensis |
| AAC26828.1 | AF075603 | Fagus sylvatica | CAC21391.1 | AJ401274 | Zea mays |
| CAC09576.1 | AJ298988 | | AAB41811.1 | L36157 | Medicago sativa |
| | | Arachis hypogaea | BAA92500.1 | AP001383 | Oryza sativa |
| SEQ ID NO. 1596 | | Lycopersicon esculentum | BAA14143.1 | D90115 | Armoracia rusticana |
| AAA32676.1 | M37637 | Nicotiana tabacum | CAA80502.1 | Z22920 | Spirodela polyrrhiza |
| CAA64413.1 | X94943 | Stylosanthes humilis | CAA62225.1 | X90692 | Medicago sativa |
| BAA82307.1 | AB027753 | Phaseolus vulgaris | CAA66036.1 | X97350 | Populus balsamifera subsp. |
| AAB67737.1 | L77080 | Spinacia oleracea | trichocarpa | | |
| AAD37429.2 | AF149279 | Glycine max | CAA62226.1 | X90693 | Medicago sativa |
| CAA71494.1 | Y10468 | Populus balsamifera subsp. | | | |
| AAD37375.1 | AF145349 | | SEQ ID NO. 1597 | | |
| CAA66037.1 | X97351 | | CAB08111.1 | Z94180 | Lycopersicon esculentum |
| trichocarpa | | | CAA81558.1 | Z26949 | Solanum tuberosum |
| AA65637.1 | L13654 | Lycopersicon esculentum | AAC72195.1 | AF069911 | Zea mays |
| AAF63024.1 | AF244921 | Spinacia oleracea | AAG43499.1 | AF209924 | Lycopersicon esculentum |
| AAD37430.1 | AF149280 | Phaseolus vulgaris | AAA97411.1 | U51918 | Pisum sativum |
| BAA07664.1 | D42065 | Nicotiana tabacum | CAA10992.1 | AJ222787 | Hordeum vulgare |
| BAA07663.1 | D42064 | Nicotiana tabacum | | | |
| CAB94692.1 | AJ242742 | Ipomoea batatas | | | |
| BRA90365.1 | AP001081 | Oryza sativa | | | |

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| CAA06309.1 | AJ005042 | Cicer arietinum | AAC97494.1 | AF079232 | Lycopersicon esculentum |
| CAA54525.1 | X77319 | Asparagus officinalis | AAB67993.1 | U73746 | Gossypium hirsutum |
| AAF67342.1 | AJ229795 | Vigna radiata | AAD24540.1 | AF113545 | Nicotiana tabacum |
| CAA10128.1 | AJ012687 | Cicer arietinum | AAB67994.1 | U73747 | Gossypium hirsutum |
| AAB61470.1 | AF004812 | Mangifera indica | AAA79922.1 | U19941 | Fragaria x ananassa |
| AAC77377.1 | AF064786 | Carica papaya | CAA75213.1 | Y14972 | Nicotiana tabacum |
| AAF21626.1 | AF023847 | Lycopersicon esculentum | CAA76769.1 | Y17502 | Nicotiana tabacum |
| CAA10174.1 | AJ012797 | Lycopersicon esculentum | AAC97493.1 | AF079231 | Lycopersicon esculentum |
| CAA10175.1 | AJ012798 | Lycopersicon esculentum | CAA75214.1 | Y14973 | Nicotiana tabacum |
| AAF70821.1 | AF154420 | Lycopersicon esculentum | CAA76770.1 | Y17503 | Nicotiana tabacum |
| AAC25984.1 | AF020390 | Lycopersicon esculentum | CAB92956.1 | AJ401032 | Solanum tuberosum |
| CAA59162.1 | X84684 | Brassica oleracea | AAB71830.1 | AF006197 | Lavatera thuringiaca |
| CAA10173.1 | AJ012796 | Lycopersicon esculentum | CAA66900.2 | X98244 | Zea mays |
| AAF70822.1 | AF154421 | Lycopersicon esculentum | CAA52903.1 | X74947 | Medicago sativa |
| BAB21492.1 | AB046543 | Pyrus pyrifolia | CAA75308.1 | Y15036 | Medicago truncatula |
| CAA09457.1 | AJ011010 | Cicer arietinum | CAA66901.1 | X98245 | Zea mays |
| AAF67341.1 | AF229794 | Vigna radiata | AAG32468.1 | AF308589 | Ceratopteris richardii |
| CAA07236.1 | AJ006771 | Cicer arietinum | CAA72183.1 | Y11348 | Medicago sativa |
| CAA10064.1 | AJ012578 | Carica papaya | AAG32467.1 | AF308588 | Ceratopteris richardii |
| AAC28739.1 | AF079874 | Carica papaya | SEQ ID NO. 1604 | | |
| AAG12249.1 | AF184080 | Prunus armeniaca | AAK17067.1 | AF254558 | Oryza sativa |
| CAA06310.1 | AJ005043 | Cicer arietinum | BAA89800.1 | AB028185 | Oryza sativa |
| AAD45349.1 | AF159124 | Vitis vinifera | BAA89799.1 | AB028184 | Oryza sativa |
| SEQ ID NO. 1602 | | | BAA89798.1 | AB028183 | Oryza sativa |
| AAA86950.1 | U10044 | Pisum sativum | BAA89797.1 | AB028182 | Oryza sativa |
| AAA86952.1 | U10046 | Pisum sativum | BAA89801.1 | AB028186 | Oryza sativa |
| CAA50035.1 | X70702 | Pisum sativum | AAF68626.1 | AF254124 | Medicago truncatula |
| AAA86951.1 | U10045 | Pisum sativum | BAA89802.1 | AB028187 | Oryza sativa |
| BAA96367.1 | AB043975 | Panax ginseng | BAA78417.1 | AB021178 | Nicotiana tabacum |
| CAB57298.1 | Z30162 | Solanum tuberosum | SEQ ID NO. 1606 | | |
| CAA48289.1 | X68202 | Pyrobotrys stellata | AAD09209.1 | U38247 | Glycine soja |
| AAA86949.1 | U10043 | Pisum sativum | AAG37440.1 | AY007600 | Glycine max |
| SEQ ID NO. 1603 | | | AAG37451.1 | AY007611 | Glycine tomentella |
| AAF01250.1 | AF188832 | Fragaria x ananassa | AAG15418.1 | AY007515 | Glycine tomentella |
| AAC33305.1 | U89609 | Gossypium hirsutum | AAG15412.1 | AY007506 | Glycine tomentella |
| CAA06492.1 | AJ005347 | Cicer arietinum | AAG37441.1 | AY007601 | Glycine tabacina |
| CAA63710.1 | X93308 | Capsicum annuum | AAG37443.1 | AY007603 | Glycine tomentella |
| CAA10261.1 | AJ130956 | Capsicum annuum | AAG37444.1 | AY007604 | Glycine tomentella |
| CAA10210.1 | AJ130829 | Capsicum annuum | AAG15415.1 | AY007510 | Glycine tabacina |

| | | |
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| AAG37438.1 | AY007598 | Glycine canescens |
| AAG15416.1 | AY007511 | Glycine tomentella |
| AAG37448.1 | AY007608 | Glycine tomentella |
| AAE91486.1 | AF287476 | Glycine tomentella |
| AAG37446.1 | AY007606 | Glycine tomentella |
| AAG37445.1 | AY007605 | Glycine tomentella |
| AAG37452.1 | AY007612 | Glycine tomentella |
| AAG15413.1 | AY007507 | Glycine tomentella |
| AAG37442.1 | AY007602 | Glycine tabacina |
| AAG37447.1 | AY007607 | Glycine tomentella |
| AAG15417.1 | AY007514 | Glycine tomentella |
| AAD09208.1 | U38246 | Glycine soja |
| AAG37439.1 | AY007599 | Glycine canescens |
| AAG15414.1 | AY007509 | Glycine tabacina |
| AAG37449.1 | AY007609 | Glycine tomentella |
| AAG37450.1 | AY007610 | Glycine tomentella |
| ARG37454.1 | AY007614 | Glycine tomentella |
| AAG37453.1 | AY007613 | Glycine tomentella |
| CMA42221.1 | X59700 | Helianthus annuus |
| AAC49862.1 | U72767 | Phaseolus vulgaris |
| CMA31590.1 | X13202 | Gossypium hirsutum |
| ARG12980.1 | AY007517 | Glycine tomentella |
| ARG12981.1 | AY007518 | Glycine tomentella |
| ARG12982.1 | AY007519 | Glycine tomentella |
| ARG12979.1 | AY007516 | Glycine tomentella |
| ABO1552.1 | L47607 | Picea glauca |
| AAD01541.1 | AF004810 | Glycine max |
| CMA45506.1 | X64145 | Lemna gibba |
| SEQ ID NO. | 1609 | |
| AAC05921.1 | AF031247 | Lophopyrum elongatum |
| CAC00637.1 | AJ271620 | Prunus persica |
| AAD02262.1 | AF043096 | Hordeum vulgare |
| AAA32952.1 | M95810 | Hordeum vulgare |
| AAF01693.1 | AF181455 | Hordeum vulgare |
| AAC49658.1 | U62486 | Prunus persica |
| AAC49657.1 | U34809 | Prunus persica |
| AAD50291.1 | AF172263 | Prunus dulcis |
| AAC05923.1 | AF031249 | Lophopyrum elongatum |
| AAC05924.1 | AF031250 | Lophopyrum elongatum |
| AAF01694.1 | AF181456 | Hordeum vulgare |
| AAD02257.1 | AF043091 | Hordeum vulgare |
| CAC34554.1 | Y07600 | Pistacia vera |
| AAF01698.1 | AF181460 | Hordeum vulgare |
| AAD02256.1 | AF043090 | Hordeum vulgare |
| AAD02261.1 | AF043095 | Hordeum vulgare |
| CAA33361.1 | X15287 | Hordeum vulgare |
| CAA44787.1 | X63061 | Pisum sativum |
| AAD02258.1 | AF043092 | Hordeum vulgare |
| CAA44788.1 | X63062 | Pisum sativum |
| AAF60172.1 | AF236067 | Elaeis guineensis |
| CAA44789.1 | X63063 | Pisum sativum |
| AAD02252.1 | AF043086 | Hordeum vulgare |
| AAF01699.1 | AF181461 | Hordeum vulgare |
| AAF01692.1 | AF181454 | Hordeum vulgare |
| ABA51381.1 | U91970 | Pisum sativum |
| CAA51278.1 | X72748 | Hordeum vulgare |
| AAF01695.1 | AF181457 | Hordeum vulgare |
| CAA33360.1 | X15286 | Hordeum vulgare |
| AAF01691.1 | AF181453 | Hordeum vulgare |
| AAD02255.1 | AF043089 | Hordeum vulgare |
| SEQ ID NO. | 1612 | |
| AB36543.1 | U77935 | Phaseolus vulgaris |
| SEQ ID NO. | 1614 | |
| AAD10204.1 | AF030260 | Vicia sativa |
| AAG33645.1 | AF092917 | Vicia sativa |
| AAG17470.1 | AF123609 | Triticum aestivum |
| AAK31592.1 | AY029178 | Brassica rapa subsp. pekinensis |
| CAB41474.1 | AJ238402 | Catharanthus roseus |
| AB94586.1 | AF022457 | Glycine max |
| AB94588.1 | AF022459 | Glycine max |
| CAA89260.1 | Z49263 | Pisum sativum |
| AAG09208.1 | AF175278 | Pisum sativum |
| AAC49188.2 | U29333 | Pisum sativum |
| CAA04117.1 | AJ000478 | Helianthus tuberosus |
| CAA04116.1 | AJ000477 | Helianthus tuberosus |
| BAA22423.1 | AB001380 | Glycyrrhiza echinata |
| BAA74466.1 | AB022733 | Glycyrrhiza echinata |
| AAA17732.1 | L19074 | Catharanthus roseus |
| BAA93634.1 | AB025016 | Lotus japonicus |

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| SEQ ID NO. | 1623 | 1624 | 1625 |
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| CAA81689.1 | 227165 | CAA83436.1 | CAA72092.1 |
| CAA50218.1 | X70868 | AAD45391.1 | AAD55566.1 |
| CAA50217.1 | X70867 | AAD45390.1 | AAC49896.1 |
| CAA78100.1 | Z12114 | BAAB9458.1 | AAD02069.1 |
| AAA33450.1 | L21007 | CAA76369.1 | AB05641.1 |
| AAA33452.1 | L21006 | CAC19689.1 | AAD28260.1 |
| AAA33451.1 | L21008 | CAA76369.1 | CAC21229.1 |
| CAA78101.1 | Z12115 | CAC19689.1 | CAC21231.1 |
| CAA77645.1 | Z11546 | CAA76369.1 | AAA19660.1 |
| AAB39827.1 | U46136 | AAC99332.1 | CAC21230.1 |
| AAA66365.1 | U21139 | CAA47604.1 | CAC21228.1 |
| BAA92724.1 | AP001389 | AAF65765.1 | BAAB92322.1 |
| AAA32980.1 | M35600 | CAA57727.1 | CAA77575.1 |
| CAA93139.1 | Z68903 | AAF04294.1 | BAAB18780.1 |
| AAA32979.1 | M35599 | CAA53390.1 | SEQ ID NO. 1626 |
| CAA81736.1 | Z27222 | AAD41024.1 | BAAB90610.1 |
| AAC68501.1 | AF030515 | CAAB07811.1 | CAA43454.1 |
| BAB16318.1 | AB049590 | AAF04295.1 | Oryza sativa |
| AAB39828.1 | U46137 | CAA09989.1 | Nicotiana tabacum |
| CAA89836.1 | Z49766 | SEQ ID NO. 1627 | |
| CAA09989.1 | AJ012318 | CAA83436.1 | |
| | | AAD45391.1 | |
| | | AAD45390.1 | |
| | | BAAB9458.1 | |
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| | | CAA57727.1 | |
| | | AAF04294.1 | |
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| | | AAD41024.1 | |
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| | | CAC19689.1 | |
| | | AAC99332.1 | |
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| | | AAD41024.1 | |
| | | CAAB07811.1 | |
| | | AAF04295.1 | |
| | | CAA09989.1 | |
| | | SEQ ID NO. 1631 | |
| | | CAA83436.1 | |
| | | AAD45391.1 | |
| | | AAD45390.1 | |
| | | BAAB9458.1 | |
| | | CAA76369.1 | |
| | | CAC19689.1 | |
| | | AAC99332.1 | |
| | | CAA47604.1 | |
| | | AAF65765.1 | |
| | | CAA57727.1 | |

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| CAA66037.1 | X97351 | Populus balsamifera subsp. | SEQ ID NO. 1633 | |
|-------------|----------|----------------------------|-----------------|-------------------------------|
| trichocarpa | | | | Cucumis sativus |
| BAA82306.1 | AB027752 | Nicotiana tabacum | BAA5819.1 | AB026500 |
| CAB94692.1 | AJ242742 | Ipomoea batatas | AAD31396.1 | AF118843 |
| BAA92497.1 | AP001383 | Oryza sativa | AAC31213.3 | AF026267 |
| BAA92422.1 | AP001366 | Oryza sativa | BAB13718.1 | AB040406 |
| CAA40796.1 | X57564 | Armoracia rusticana | AAD31397.1 | AF118844 |
| BAA06335.1 | D30653 | Populus kitakamiensis | AAD37577.1 | AF141929 |
| AAB48184.1 | L24120 | Linum usitatissimum | AAC31123.1 | AF032448 |
| CAA66034.1 | X97348 | Populus balsamifera subsp. | AAD37576.1 | AF141928 |
| trichocarpa | | | AAB97160.1 | AF022727 |
| CAB65334.1 | AJ250121 | Picea abies | AAC02213.1 | AF043084 |
| CAA62597.1 | X91172 | Raphanus sativus | AAA85479.1 | U41103 |
| CAA66036.1 | X97350 | Populus balsamifera subsp. | AAF28893.1 | AF124527 |
| trichocarpa | | | BAA37136.1 | AB015496 |
| AAF63025.1 | AF244922 | Spinacia oleracea | AAC39497.1 | AF047476 |
| CAA66035.1 | X97349 | Populus balsamifera subsp. | AAF61919.1 | AF227742 |
| trichocarpa | | | AAC02214.1 | AF043085 |
| AAC98519.1 | AF007211 | Glycine max | BAB18937.1 | AB052228 |
| AAB06183.1 | M37636 | Arachis hypogaea | BAA5817.1 | AB026498 |
| BAA84764.1 | D84400 | Oryza sativa | AAB39386.1 | U47279 |
| AAC49819.1 | AF014468 | Oryza sativa | AAD03598.1 | AF098272 |
| CAA71492.1 | Y10466 | Spinacia oleracea | AAB72193.1 | AF013979 |
| CAA71493.1 | Y10467 | Spinacia oleracea | AAB94773.1 | AF039746 |
| BAA06334.1 | D30652 | Populus kitakamiensis | CAA06723.1 | AJ005829 |
| BAA11852.1 | D83224 | Populus nigra | AAD26899.1 | AF055894 |
| BAA77389.1 | AB024439 | Scutellaria baicalensis | BAA37137.1 | AB015497 |
| CAA62615.1 | X91232 | Mercurialis annua | BAA5818.1 | AB026499 |
| AAD37427.1 | AF149277 | Phaseolus vulgaris | AAD12777.1 | AF051938 |
| CAA62226.1 | X90693 | Medicago sativa | AAB96765.2 | AF039921 |
| BAA92967.1 | AP001551 | Oryza sativa | AAF08300.1 | AF113748 |
| AAB02554.1 | L37790 | Stylosanthes humilis | AAG41977.1 | AF311942 |
| CAA62227.1 | X90694 | Medicago sativa | AAD38057.1 | AF154119 |
| BAA14143.1 | D90115 | Armoracia rusticana | AAC31157.1 | AF047477 |
| AAC49821.1 | AF014470 | Oryza sativa | CAA69646.1 | Y08359 |
| BAA07241.1 | D38051 | Populus kitakamiensis | AAB68819.1 | U63291 |
| CAB99487.1 | AJ276227 | Hordeum vulgare | BAA96745.1 | AB035806 |
| CAA50597.1 | X71593 | Lycopersicon esculentum | CAB76929.1 | AJ276294 |
| BAA03911.1 | D16442 | Oryza sativa | BAA90551.1 | AB031028 |
| CAB67121.1 | Y19023 | Lycopersicon esculentum | BAA90552.1 | AB031029 |
| | | | | Prunus mume |
| | | | | Prunus mume |
| | | | | Dianthus caryophyllus |
| | | | | Rumex palustris |
| | | | | Rumex palustris |
| | | | | Brassica oleracea |
| | | | | Rosa hybrid cultivar |
| | | | | Carica papaya |
| | | | | Musa acuminata |
| | | | | Nicotiana tabacum |
| | | | | Solanum tuberosum |
| | | | | Cucumis sativus |
| | | | | Passiflora edulis |
| | | | | Phalaenopsis sp. 'True Lady' |
| | | | | Pisum sativum |
| | | | | Oryza sativa |
| | | | | Vigna radiata |
| | | | | Lycopersicon esculentum |
| | | | | Cucumis melo var. reticulatus |
| | | | | Cucumis sativus |
| | | | | Cucumis sativus |
| | | | | Lycopersicon esculentum |
| | | | | Prunus persica |
| | | | | Passiflora edulis |
| | | | | Brassica oleracea |
| | | | | Mangifera indica |
| | | | | Lycopersicon esculentum |
| | | | | Cucumis melo var. reticulatus |
| | | | | Cucumis sativus |
| | | | | Lycopersicon esculentum |
| | | | | 397 |

SEQ ID NO. 1634

| | | | | | |
|-----------------|----------|-------------------------------|-----------------|----------|---------------------------------|
| CAB90633.1 | AJ277743 | Fagus sylvatica | AAG34836.1 | AF244693 | Zea mays |
| CAC10358.1 | AJ277086 | Nicotiana tabacum | AAG34837.1 | AF244694 | Zea mays |
| CAC10359.1 | AJ277087 | Nicotiana tabacum | AAG34800.1 | AF243365 | Glycine max |
| CAC09575.1 | AJ298987 | Fagus sylvatica | AAC18566.1 | AF048978 | Glycine max |
| AAC36697.1 | AF075579 | Mesembryanthemum crystallinum | AAC32118.1 | AF051214 | Picea mariana |
| AAD17804.1 | AF092431 | Lotus japonicus | AAF22517.1 | AF118924 | Papaver somniferum |
| CAA72341.1 | Y11607 | Medicago sativa | AAF22518.1 | AF118925 | Papaver somniferum |
| AAD17805.1 | AF092432 | Lotus japonicus | AAG34806.1 | AF243371 | Glycine max |
| AAC36698.1 | AF075580 | Mesembryanthemum crystallinum | CAA04391.1 | AJ000923 | Carica papaya |
| AAG43835.1 | AF213455 | Zea mays | AAG34833.1 | AF244690 | Zea mays |
| AAC36699.1 | AF075581 | Mesembryanthemum crystallinum | CAA71784.1 | Y10820 | Glycine max |
| AAC36700.1 | AF075582 | Mesembryanthemum crystallinum | AAG34847.1 | AF244704 | Zea mays |
| CAB90634.1 | AJ277744 | Fagus sylvatica | AAF22519.1 | AF118926 | Papaver somniferum |
| AAD11430.1 | AF097667 | Mesembryanthemum crystallinum | SEQ ID NO. 1636 | | |
| AAB93832.1 | U81960 | Zea mays | AAD37699.1 | AF145730 | Oryza sativa |
| AAC35951.1 | AF079355 | Mesembryanthemum crystallinum | BAA93461.1 | AB028073 | Physcomitrella patens |
| AAC26828.1 | AF075603 | Oryza sativa | AAF01765.1 | AF184278 | Glycine max |
| CAC09576.1 | AJ298988 | Fagus sylvatica | AAF01764.2 | AF184277 | Glycine max |
| SEQ ID NO. 1635 | | | BAA93466.1 | AB028078 | Physcomitrella patens |
| AAG34803.1 | AF243368 | Glycine max | CAB67118.1 | Y17306 | Physcomitrella patens |
| AAG34798.1 | AF243363 | Glycine max | AAF73482.1 | AF268422 | Lycopersicon esculentum |
| AAF64450.1 | AF239928 | Euphorbia esula | AAD37697.1 | AF145728 | Brassica rapa subsp. pekinensis |
| AAG34807.1 | AF243372 | Glycine max | BAA21017.1 | D26578 | Oryza sativa |
| AAG34796.1 | AF243361 | Glycine max | BAA05624.1 | D26575 | Daucus carota |
| AAG34797.1 | AF243362 | Glycine max | BAA93460.1 | AB028072 | Daucus carota |
| AAG34801.1 | AF243366 | Glycine max | BAA93464.1 | AB028076 | Physcomitrella patens |
| AAG34804.1 | AF243369 | Glycine max | BAA93467.1 | AB028079 | Physcomitrella patens |
| ARG34809.1 | AF243374 | Glycine max | BAA93465.1 | AB028077 | Physcomitrella patens |
| ARG34808.1 | AF243373 | Glycine max | BAA05625.1 | D26576 | Daucus carota |
| AAG34810.1 | AF243375 | Glycine max | BAA93468.1 | AB028080 | Physcomitrella patens |
| AAG34844.1 | AF244701 | Zea mays | BAA05623.1 | D26574 | Daucus carota |
| AAG34805.1 | AF243370 | Glycine max | BAA05622.1 | D26573 | Daucus carota |
| AAG34831.1 | AF244688 | Zea mays | AAD37698.1 | AF145729 | Oryza sativa |
| ARG34832.1 | AF244689 | Zea mays | CAA64221.1 | X94449 | Pimpinella brachycarpa |
| ARG34849.1 | AF244706 | Zea mays | CAA64152.1 | X94375 | Pimpinella brachycarpa |
| AAG34802.1 | AF243367 | Glycine max | CAA64491.1 | X95193 | Pimpinella brachycarpa |
| CAA09187.1 | AJ010448 | Alopecurus myosuroides | BAA93463.1 | AB028075 | Physcomitrella patens |
| AAG34829.1 | AF244686 | Zea mays | CAA06728.1 | AJ005833 | Craterostigma plantagineum |
| CAA09188.1 | AJ010449 | Alopecurus myosuroides | AAD37695.1 | AF145726 | Oryza sativa |
| AAA68430.1 | J03679 | Solanum tuberosum | CAA65456.2 | X96681 | Oryza sativa |

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|-----------------|-----------|----------------------------|-----------------|----------|-------------------------------|
| AA119980.1 | AF2111193 | Oryza sativa | CAA30261.1 | X07280 | Nicotiana plumbaginifolia |
| AAK31270.1 | AC079890 | Oryza sativa | AAD10384.1 | U72253 | Oryza sativa |
| CAA63222.1 | X92489 | Glycine max | AA88794.1 | U01900 | Solanum tuberosum |
| CAA06717.1 | AJ005820 | Craterostigma plantagineum | AAA32939.1 | M62907 | Hordeum vulgare |
| | | | AAC14399.1 | AF030771 | Hordeum vulgare |
| | | | AA87456.1 | U22147 | Hevea brasiliensis |
| SEQ ID NO. 1637 | | | AAD10381.1 | U72250 | Oryza sativa |
| AAD16016.1 | AF080545 | Nepenthes alata | AAD33881.1 | AF141654 | Nicotiana tabacum |
| | | | AAA03617.1 | M80604 | Lycopersicon esculentum |
| SEQ ID NO. 1638 | | | CAB38443.1 | AJ133470 | Hevea brasiliensis |
| CAA65987.2 | X97322 | Pisum sativum | AAA63542.1 | M59443 | Nicotiana tabacum |
| BAA07209.1 | D38012 | Oryza sativa | AAA63539.1 | M60402 | Nicotiana tabacum |
| | | | AAA63541.1 | M59442 | Nicotiana tabacum |
| SEQ ID NO. 1639 | | | AAA63540.1 | M60403 | Nicotiana tabacum |
| AAC49528.1 | U56834 | Petroselinum crispum | CAA37289.1 | X53129 | Phaseolus vulgaris |
| AAD27591.1 | AF121354 | Petroselinum crispum | CAA57255.1 | X81560 | Nicotiana tabacum |
| BAA77358.1 | AB020023 | Nicotiana tabacum | CAB91554.1 | AJ277900 | Vitis vinifera |
| AAD16139.1 | AF096299 | Nicotiana tabacum | AAA19111.1 | U01902 | Solanum tuberosum |
| AAC49527.1 | U48831 | Petroselinum crispum | AA86541.1 | AF030166 | Oryza sativa |
| CAA88326.1 | Z48429 | Avena fatua | AAC39322.1 | U96096 | Hordeum vulgare |
| AAC49529.1 | U58540 | Petroselinum crispum | AAD33880.1 | AF141653 | Nicotiana tabacum |
| AAD16138.1 | AF096298 | Nicotiana tabacum | | | |
| AAC37515.1 | L41134 | Cucumis sativus | SEQ ID NO. 1641 | | |
| CAA88331.1 | Z48431 | Avena fatua | AA97510.1 | AF246266 | Lycopersicon esculentum |
| AA61864.1 | AF193771 | Nicotiana tabacum | AAD30549.1 | AF136580 | Lycopersicon esculentum |
| BAA87069.1 | AB035271 | Matricaria chamomilla | AA97509.1 | AF246266 | Lycopersicon esculentum |
| AA61863.1 | AF193770 | Nicotiana tabacum | AAD30548.1 | AF136579 | Lycopersicon esculentum |
| | | | AAC17441.1 | AF065444 | Pisum sativum |
| SEQ ID NO. 1640 | | | AA61374.1 | AF133267 | Thlaspi caerulescens |
| AAD10386.1 | U72255 | Oryza sativa | AAG09635.1 | AY007281 | Medicago truncatula |
| BAA89481.1 | AB029462 | Salix gilgiana | | | |
| CAB85903.1 | AJ251646 | Pisum sativum | SEQ ID NO. 1642 | | |
| CAA49513.1 | X69887 | Brassica napus | AAG43549.1 | AF211531 | Nicotiana tabacum |
| AA82772.2 | AF001523 | Musa acuminata | AAG43548.1 | AF211530 | Nicotiana tabacum |
| AA08679.1 | AF004838 | Musa acuminata | CAB96899.1 | AJ251249 | Catharanthus roseus |
| CAA82271.1 | Z28697 | Nicotiana tabacum | CAB96900.1 | AJ251250 | Catharanthus roseus |
| AAA18928.1 | U01901 | Solanum tuberosum | AA63205.1 | AF245119 | Mesembryanthemum crystallinum |
| AAC19114.1 | AF067863 | Solanum tuberosum | BAB16083.1 | AB036883 | Oryza sativa |
| AAA90953.1 | U30323 | Triticum aestivum | BAB03248.1 | AB037183 | Oryza sativa |
| AAA03618.1 | M80608 | Lycopersicon esculentum | CAC12822.1 | AJ299252 | Nicotiana tabacum |
| AAA51643.1 | M23120 | Nicotiana plumbaginifolia | BAA07321.1 | D38123 | Nicotiana tabacum |
| AAA34078.1 | M63634 | Nicotiana plumbaginifolia | | | |

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| AAC23899.1 | AF193803 | Oryza sativa | AAC32034.1 | AF023472 | Hordeum vulgare |
| AAG43545.1 | AF211527 | Nicotiana tabacum | AAD01600.1 | AF016713 | Lycopersicon esculentum |
| AAC62619.1 | AF057373 | Nicotiana tabacum | AAF07875.1 | AF140606 | Oryza sativa |
| SEQ ID NO. 1643 | | | AAF20002.1 | AF213936 | Prunus dulcis |
| AAA74360.1 | I33912 | Zea mays | CAC07206.1 | AJ278966 | Brassica napus |
| AAC05981.1 | AF049706 | Chloroplast Glycine max | BAB19760.1 | AB052788 | Glycine max |
| AAC05983.1 | AF049708 | Glycine max | BAB19757.1 | AB052785 | Glycine max |
| BAA11417.1 | D78573 | Oryza sativa | BAB19756.1 | AB052784 | Glycine max |
| AAA74361.1 | I33913 | Zea mays | AAB69642.1 | AF000392 | Lotus japonicus |
| AAA16972.1 | L11529 | Daucus carota | CAA93316.1 | Z69370 | Cucumis sativus |
| AAD41796.1 | AF135862 | Glycine max | AAD16016.1 | AF080545 | Nepenthes alata |
| BAA95630.1 | AB042521 | Oryza sativa | AAD42860.1 | AF154930 | Prunus dulcis |
| SEQ ID NO. 1644 | | | SEQ ID NO. 1646 | | |
| AAG43545.1 | AF211527 | Nicotiana tabacum | AAD00829.1 | U96736 | Selaginella lepidophylla |
| AAF63205.1 | AF245119 | Mesembryanthemum crystallinum | SEQ ID NO. 1647 | | |
| BAA07321.1 | D38123 | Nicotiana tabacum | AAC49326.1 | U19924 | Zinnia elegans |
| BAA97122.1 | AB016264 | Nicotiana sylvestris | AAA21135.1 | U13256 | Nicotiana alata |
| BAA87068.1 | AB035270 | Matricaria chamomilla | CAA10130.1 | AJ012689 | Cicer arietinum |
| BAA97124.1 | AB016266 | Nicotiana sylvestris | AAF82615.1 | AF157011 | Prunus dulcis |
| CAB96900.1 | AJ251250 | Catharanthus roseus | AAG09465.1 | AF227522 | Prunus dulcis |
| CAB96899.1 | AJ251249 | Catharanthus roseus | BAA08475.1 | D49529 | Pyrus pyrifolia |
| AAC62619.1 | AF057373 | Nicotiana tabacum | AAC49325.1 | U19923 | Zinnia elegans |
| BAA97123.1 | AB016265 | Nicotiana sylvestris | CAA55896.1 | X79338 | Lycopersicon esculentum |
| AAC24587.1 | AF071893 | Prunus armeniaca | CAB40355.1 | Y17446 | Lycopersicon esculentum |
| CAC12822.1 | AJ299252 | Nicotiana tabacum | CAB40353.1 | Y17444 | Lycopersicon esculentum |
| AAF76898.1 | AF274033 | Atriplex hortensis | CAA55895.1 | X79337 | Lycopersicon esculentum |
| AAD00708.1 | U91857 | Stylosanthes hamata | AAB58719.1 | AF000940 | Hordeum vulgare |
| BAA76734.1 | AB024575 | Nicotiana tabacum | BAB19803.1 | AB052842 | Oryza sativa |
| BAB03248.1 | AB037183 | Oryza sativa | BAB19804.1 | AB052843 | Oryza sativa |
| BAB16083.1 | AB036883 | Oryza sativa | BAB19805.1 | AB052844 | Oryza sativa |
| AAF23899.1 | AF193803 | Oryza sativa | CAB40354.1 | Y17445 | Lycopersicon esculentum |
| AAF05606.1 | AF190770 | Oryza sativa | AAB58718.1 | AF000939 | Hordeum vulgare |
| BAA78738.1 | AB023482 | Oryza sativa | BAA10891.1 | D64011 | Luffa cylindrica |
| AAG43548.1 | AF211530 | Nicotiana tabacum | BAA10892.1 | D64012 | Luffa cylindrica |
| AAG43549.1 | AF211531 | Nicotiana tabacum | AAG21384.1 | AF301533 | Petunia integrifolia |
| BAA99376.1 | AP002526 | Oryza sativa | BAA08474.1 | D49528 | Pyrus pyrifolia |
| AAK01089.1 | AF298231 | Hordeum vulgare | AAA60466.1 | U07363 | Petunia x hybrida |
| SEQ ID NO. 1645 | | | AAK15437.1 | AF239910 | Petunia axillaris |
| | | | AAF36980.1 | AF232304 | Solanum chacoense |

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|-----------------|----------|-----------------------|-----------------|-------------------------|
| AAA60465.1 | U07362 | Petunia x hybrida | AAG34840.1 | Zea mays |
| BAA24018.1 | D63888 | Nicotiana glauca | AAG34848.1 | Zea mays |
| AAF05729.1 | AF191732 | Solanum chacoense | AAG34833.1 | Zea mays |
| AAD56217.1 | AF176533 | Solanum chacoense | AAC32118.1 | Picea mariana |
| | | | AAD10129.1 | Aegilops tauschii |
| SEQ ID NO. 1649 | | | AAG34850.1 | Zea mays |
| AAC49528.1 | U56834 | Petroselinum crispum | AAG34830.1 | Zea mays |
| BAA77358.1 | AB020023 | Nicotiana tabacum | AAG34839.1 | Zea mays |
| AAD16139.1 | AF096299 | Nicotiana tabacum | CAA09188.1 | Alopecurus myosuroides |
| AAD27591.1 | AF121354 | Petroselinum crispum | AAG34835.1 | Zea mays |
| AAC37515.1 | I44134 | Cucumis sativus | AAG34828.1 | Zea mays |
| AAC49527.1 | U48831 | Petroselinum crispum | CAA09187.1 | Alopecurus myosuroides |
| CAA88326.1 | Z48429 | Avena fatua | CAA09189.1 | Alopecurus myosuroides |
| AAC49529.1 | U58540 | Petroselinum crispum | AAG34847.1 | Zea mays |
| CAA88331.1 | Z48431 | Avena fatua | AAG34846.1 | Zea mays |
| AAD16138.1 | AF096298 | Nicotiana tabacum | AAG34834.1 | Zea mays |
| AAF61864.1 | AF193771 | Nicotiana tabacum | AAG34841.1 | Zea mays |
| BAA87069.1 | AB035271 | Matricaria chamomilla | AAG34845.1 | Zea mays |
| AAF61863.1 | AF193770 | Nicotiana tabacum | AAG34797.1 | Glycine max |
| | | | AAG34798.1 | Glycine max |
| SEQ ID NO. 1650 | | | AAG34809.1 | Glycine max |
| BAA85440.1 | AF000616 | Oryza sativa | AAC32139.1 | Picea mariana |
| CAB53493.1 | AJ245900 | Oryza sativa | AAG34844.1 | Zea mays |
| | | | AAG34843.1 | Zea mays |
| SEQ ID NO. 1654 | | | AAG34807.1 | Glycine max |
| AAD51854.1 | AF178990 | Vitis riparia | AAF64450.1 | Euphorbia esula |
| AAB00555.1 | U54704 | Phaseolus vulgaris | AAG34801.1 | Glycine max |
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| SEQ ID NO. 1659 | | | SEQ ID NO. 1667 | |
| AAF62403.1 | AF212183 | Nicotiana tabacum | AAB69642.1 | Lotus japonicus |
| CAA68848.1 | Y07563 | Nicotiana tabacum | AAD01600.1 | Lycopersicon esculentum |
| AAB97367.1 | AF039532 | Oryza sativa | AAC32034.1 | Hordeum vulgare |
| | | | AAF20002.1 | Prunus dulcis |
| SEQ ID NO. 1665 | | | AAF07875.1 | Oryza sativa |
| AAF22517.1 | AF118924 | Papaver somniferum | CAC07206.1 | Brassica napus |
| AAF22518.1 | AF118925 | Papaver somniferum | CAA93316.1 | Cucumis sativus |
| AAF22519.1 | AF118926 | Papaver somniferum | BAB19757.1 | Glycine max |
| AAF229773.1 | AF159229 | Gossypium hirsutum | BAB19760.1 | Glycine max |
| AAG34838.1 | AF244695 | Zea mays | BAB19756.1 | Glycine max |
| AAG34795.1 | AF243360 | Glycine max | AAD16016.1 | Nepenthes alata |
| AAG34842.1 | AF244699 | Zea mays | AAD42860.1 | Prunus dulcis |

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|-----------------|------------|-----------------------------|-----------------|------------|-------------------------------|-------------------------------|
| SEQ ID NO. 1668 | AAK21965.1 | AY028699 | Brassica napus | CAA09419.1 | AJ010942 | Lycopersicon esculentum |
| AAD21872.1 | AF078082 | Phaseolus vulgaris | CAA68813.1 | Y07520 | Chlorella kessleri | Chlorella kessleri |
| AAA33915.1 | L27821 | Oryza sativa | CAB52689.1 | AJ132224 | Lycopersicon esculentum | Oryza sativa |
| BAA82556.1 | AB030083 | Populus nigra | BAB19864.1 | AB052885 | Chlorella kessleri | Chlorella kessleri |
| AAK11674.1 | AF339747 | Lophopyrum elongatum | CAA39036.1 | X55349 | Nicotiana tabacum | Nicotiana tabacum |
| AAF43496.1 | AF131222 | Lophopyrum elongatum | CAA47324.1 | X66856 | Ricinus communis | Ricinus communis |
| AAG03090.1 | AC073405 | Oryza sativa | AAA79761.1 | L08196 | Picea abies | Picea abies |
| AAB93834.1 | U82481 | Zea mays | AAA79857.1 | L08188 | Chlorella kessleri | Chlorella kessleri |
| AAF66615.1 | AF142596 | Nicotiana tabacum | CAB06079.1 | Z83829 | Vitis vinifera | Vitis vinifera |
| AAG25966.1 | AF302082 | Nicotiana tabacum | CAA53192.1 | X75440 | Vitis vinifera | Vitis vinifera |
| AAB09771.1 | U67422 | Zea mays | CAA70777.1 | Y09590 | Vicia faba | Vicia faba |
| AAF34428.1 | AF172282 | Oryza sativa | CAA04511.1 | AJ001061 | Oryza sativa | Oryza sativa |
| AAC23542.1 | U20948 | Ipomoea trifida | CAB07812.1 | Z93775 | Oryza sativa | Oryza sativa |
| BAA94516.1 | AP001800 | Oryza sativa | BAB19863.1 | AB052884 | Oryza sativa | Oryza sativa |
| CAA73134.1 | Y12531 | Brassica oleracea | BAB19862.1 | AB052883 | Medicago truncatula | Medicago truncatula |
| BAA92954.1 | AP001551 | Oryza sativa | AAB06594.1 | U38651 | Oryza sativa | Oryza sativa |
| AAG16628.1 | AY007545 | Brassica napus | BAA85398.1 | AP000615 | Beta vulgaris | Beta vulgaris |
| CAB51834.1 | 00069 | Oryza sativa | AAD55054.1 | AF173655 | Lycopersicon esculentum | Lycopersicon esculentum |
| BAA06538.1 | D31737 | Nicotiana tabacum | CAB52690.1 | AJ132225 | | |
| CAA73133.1 | Y12530 | Brassica oleracea | SEQ ID NO. 1673 | | | |
| CAB89179.1 | AJ245479 | Brassica napus subsp. napus | AAG00510.1 | AF285172 | Phaseolus vulgaris | Phaseolus vulgaris |
| AAA33008.1 | M97667 | Brassica napus | CAA97692.1 | Z73295 | Catharanthus roseus | Catharanthus roseus |
| BAA92837.1 | AB032474 | Brassica oleracea | CAB51834.1 | 00069 | Oryza sativa | Oryza sativa |
| AAA33000.1 | M76647 | Brassica oleracea | AAK21965.1 | AY028699 | Brassica napus | Brassica napus |
| CAA79355.1 | Z18921 | Brassica oleracea | AAF91323.1 | AF244889 | Glycine max | Glycine max |
| CAA67145.1 | X98520 | Brassica oleracea | AAF59906.1 | AF197947 | Glycine max | Glycine max |
| CAA74661.1 | Y14285 | Brassica oleracea | AAF91324.1 | AF244890 | Glycine max | Glycine max |
| AAA62232.1 | U00443 | Brassica oleracea | AAF91322.1 | AF244888 | Glycine max | Glycine max |
| BAA23676.1 | AB000970 | Brassica napus | AAF59905.1 | AF197946 | Glycine max | Glycine max |
| BAA07577.2 | D38564 | Brassica rapa | AAK11567.1 | AF318491 | Lycopersicon hirsutum | Lycopersicon hirsutum |
| CAA74662.1 | Y14286 | Brassica oleracea | AAK11569.1 | AF318493 | Lycopersicon hirsutum | Lycopersicon hirsutum |
| BAA07576.1 | D38563 | Brassica rapa | AAF76306.1 | AF220602 | Lycopersicon pimpinellifolium | Lycopersicon pimpinellifolium |
| SEQ ID NO. 1669 | | | AAC48914.1 | U02271 | Lycopersicon pimpinellifolium | Lycopersicon pimpinellifolium |
| AAG43998.1 | AF215837 | Apium graveolens var. dulce | AAB47423.1 | U59315 | Lycopersicon pimpinellifolium | Lycopersicon pimpinellifolium |
| AAF74566.1 | AF215852 | Nicotiana tabacum | AAK11566.1 | AF318490 | Lycopersicon hirsutum | Lycopersicon hirsutum |
| AAF74565.1 | AF215851 | Spinacia oleracea | AAC36318.1 | AF053127 | Malus x domestica | Malus x domestica |
| AAF74567.1 | AF215853 | Solanum tuberosum | AAB09771.1 | U67422 | Zea mays | Zea mays |
| AAF74568.1 | AF215854 | Zea mays | AAB47421.1 | U59316 | Lycopersicon esculentum | Lycopersicon esculentum |
| | | | AAF76313.1 | AF220603 | Lycopersicon esculentum | Lycopersicon esculentum |
| | | | AAG03090.1 | AC073405 | Oryza sativa | Oryza sativa |

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| AAD54936.1 | AF141374 | Petroselinum crispum | AAB41324.1 | U83591 | Medicago sativa |
| AAF00131.1 | AF147091 | Fragaria x ananassa | CAC17793.1 | AJ301671 | Nicotiana sylvestris |
| AAC95376.1 | AF105426 | Cynodon dactylon | AAB41325.1 | U83592 | Medicago sativa |
| BAA95846.1 | AP002070 | Oryza sativa | AAB23263.1 | S43926 | Phaseolus vulgaris |
| AAA32986.1 | M95835 | Brassica napus | AAA33756.1 | M13968 | Phaseolus vulgaris |
| AAF69783.1 | AF135143 | Arabis lemmonii | CAA35945.1 | X51599 | Nicotiana tabacum |
| AAF69775.1 | AF135135 | Arabis drummondii | AAA34070.1 | M15173 | Nicotiana tabacum |
| AAF69792.1 | AF135152 | Arabis parishii | CAA45822.1 | X64519 | Nicotiana tabacum |
| AAC95375.1 | AF105425 | Cynodon dactylon | SEQ ID NO. 1680 | | |
| AAF69785.1 | AF135145 | Arabis lignifera | BAA85400.1 | AP000615 | Oryza sativa |
| AAF69770.1 | AF135130 | Arabis holboellii | CAB06083.1 | Z83834 | Hordeum vulgare |
| AAF69781.1 | AF135141 | Arabis gunnisoniana | CAA74909.1 | Y14573 | Hordeum vulgare |
| AAF69777.1 | AF135137 | Arabis fecunda | CAA06487.1 | AJ005341 | Linum usitatissimum |
| AAF69790.1 | AF135150 | Arabis microphylla | | | |
| AAF69787.1 | AF135147 | Arabis lignifera | SEQ ID NO. 1681 | | |
| AAF69772.1 | AF135132 | Arabis gunnisoniana | BAA82107.1 | AB022693 | Nicotiana tabacum |
| AAF69782.1 | AF135142 | Halimolobos perplexa var. | AAC31956.1 | AF080595 | Pimpinella brachycarpa |
| perplexa | | | AAD55974.1 | AF121353 | Petroselinum crispum |
| AAF69784.1 | AF135144 | Arabis lemmonii | BAA77383.1 | AB020590 | Nicotiana tabacum |
| AAF69788.1 | AF135148 | Arabis lyallii | AAC49527.1 | U48831 | Petroselinum crispum |
| BAA03750.1 | D16222 | Oryza sativa | CAA88326.1 | Z48429 | Avena fatua |
| AAF69776.1 | AF135136 | Arabis fecunda | AAD16139.1 | AF096299 | Nicotiana tabacum |
| CAA40107.1 | X56787 | Oryza sativa | BAA86031.1 | AB026890 | Nicotiana tabacum |
| BAB13369.1 | AB048531 | Psophocarpus tetragonolobus | AAC37515.1 | L44134 | Cucumis sativus |
| AAF69778.1 | AF135138 | Arabis glabra | AAF23898.1 | AF193802 | Oryza sativa |
| AAF69786.1 | AF135146 | Arabis lignifera | AAD16138.1 | AF096298 | Nicotiana tabacum |
| BAA82826.1 | AB023464 | Arabis gemmifera | AAC49529.1 | U58540 | Petroselinum crispum |
| AAF69773.1 | AF135133 | Arabis blepharophylla | CAA88331.1 | Z48431 | Avena fatua |
| AAF69791.1 | AF135151 | Arabis microphylla | AAC49528.1 | U56834 | Petroselinum crispum |
| AAF69793.1 | AF135153 | Arabis parishii | AAG35658.1 | AF204925 | Petroselinum crispum |
| CAA39535.1 | X56063 | Oryza sativa | BAB16432.1 | AB041520 | Nicotiana tabacum |
| BAA03749.1 | D16221 | Oryza sativa | BAA77358.1 | AB020023 | Nicotiana tabacum |
| AAF69789.1 | AF135149 | Arabis microphylla | AAC35659.1 | AF204926 | Petroselinum crispum |
| CAA71402.1 | Y10373 | Medicago truncatula | AAD27591.1 | AF121354 | Petroselinum crispum |
| AAC16010.1 | AF061805 | Elaeagnus umbellata | CAB66338.1 | AJ279697 | Betula pendula |
| CAA53626.1 | X76041 | Triticum aestivum | AAF61864.1 | AF193771 | Nicotiana tabacum |
| BAA33971.1 | AB008892 | Nicotiana tabacum | BAA87069.1 | AB035271 | Matricaria chamomilla |
| CAA47921.1 | X67693 | Solanum tuberosum | AAF61863.1 | AF193770 | Nicotiana tabacum |
| AAF69780.1 | AF135140 | Arabis glabra | SEQ ID NO. 1682 | | |
| BAB18519.1 | AB051578 | Secale cereale | | | |
| AAAS1377.1 | L37289 | Oryza sativa | | | |

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| CAA55128.1 | X78325 | Nicotiana tabacum |
| CAA54373.1 | X77110 | Nicotiana tabacum |
| CAA54374.1 | X77111 | Nicotiana tabacum |
| SEQ ID NO. 1685 | | |
| CAB55394.1 | AL117264 | Oryza sativa |
| BAA78563.1 | AB024338 | Atriplex lentiformis |
| AAB97470.1 | AF042489 | Oryza sativa |
| AAA33030.1 | M93041 | Mesembryanthemum crystalli |
| CAB65371.1 | AJ250834 | Pisum sativum |
| CAB55559.1 | AJ237943 | Triticum aestivum |
| CAB65370.1 | AJ250833 | Pisum sativum |
| CAB55558.1 | AJ237942 | Triticum aestivum |
| AAD43971.1 | AF141878 | Oryza sativa |
| AAD43973.1 | AF141880 | Oryza sativa |
| AAC04837.1 | AF032976 | Oryza sativa |
| AAG00425.1 | AF250933 | Hordeum vulgare |
| AAD43972.1 | AF141879 | Oryza sativa |
| CAA63659.1 | X93171 | Hordeum vulgare |
| AAC04833.1 | AF032972 | Oryza sativa |
| AAC04834.1 | AF032973 | Oryza sativa |
| AAC04832.1 | AF032971 | Oryza sativa |
| AAG00426.1 | AF250934 | Hordeum vulgare |
| AAG00427.1 | AF250935 | Hordeum vulgare |
| AAF34811.1 | AF005084 | Triticum aestivum |
| AAC04835.1 | AF032974 | Oryza sativa |
| BAB39965.1 | AP003018 | Oryza sativa |
| BAB39980.1 | AP003020 | Oryza sativa |
| AAG00428.1 | AF250936 | Hordeum vulgare |
| AAA20245.1 | U01963 | Hordeum vulgare |
| CAC19429.1 | AJ291825 | Lolium perenne |
| AAA34270.1 | M63223 | Triticum aestivum |
| AAA34268.1 | M21962 | Triticum aestivum |
| CAA74595.1 | Y14203 | Hordeum vulgare |
| AAG00429.1 | AF250937 | Hordeum vulgare |
| CAB65369.1 | AJ250832 | Pisum sativum |
| AAA32959.1 | L15737 | Hordeum vulgare |
| CAA71052.1 | Y09917 | Triticum aestivum |
| AAA34271.1 | M63224 | Triticum aestivum |
| CAA71050.1 | Y09915 | Triticum aestivum |
| BAA86880.1 | AB028454 | Barbula unguiculata |
| Brassica napus | | |
| Brassica napus | | |
| Brassica napus | | |
| Cicer arietinum | | |
| Populus tremuloides | | |
| Lolium perenne | | |
| Lithospermum erythrorhizon | | |
| Petroselinum crispum | | |
| Rubus idaeus | | |
| Petroselinum crispum | | |
| Populus tremuloides | | |
| Pinus taeda | | |
| Pinus taeda | | |
| Pinus taeda | | |
| Populus x generosa | | |
| Lolium perenne | | |
| Populus x generosa | | |
| Oryza sativa | | |
| Pinus taeda | | |
| Rubus idaeus | | |
| Lithospermum erythrorhizon | | |
| Solanum tuberosum | | |
| Lolium perenne | | |
| Rubus idaeus | | |
| Glycine max | | |
| Juglans nigra | | |
| Tsuga canadensis | | |
| Nothotsuga longibracteata | | |
| Tsuga canadensis | | |
| Picea smithiana | | |
| Cedrus atlantica | | |
| Pinus armandii | | |
| Pinus armandii | | |
| Pinus armandii | | |
| Pseudotsuga sinensis | | |
| Pseudotsuga sinensis | | |
| Pseudolarix amabilis | | |
| Tsuga mertensiana | | |
| Abies firma | | |
| CAA19877.1 | AJ401089 | |
| CAA96523.1 | Z72153 | |
| CAA64327.1 | X94624 | |
| CAA06820.1 | AJ006025 | |
| AAC24504.1 | AF041050 | |
| AAF37734.1 | AF052223 | |
| BAA08366.2 | D49367 | |
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| AAF91309.1 | AF233686 | |
| CAA31697.1 | X13325 | |
| AAC24503.1 | AF041049 | |
| AAB42382.1 | U39404 | |
| AAA92669.1 | U12013 | |
| AAB42383.1 | U39405 | |
| AAC39366.1 | AF008184 | |
| AAF37733.1 | AF052222 | |
| AAC39365.1 | AF008183 | |
| CAA36850.1 | X52623 | |
| AAA92668.1 | U12012 | |
| AAF91308.1 | AF239685 | |
| BAA08365.1 | D49366 | |
| AA333842.1 | M62755 | |
| AAF37732.1 | AF052221 | |
| AAF91310.1 | AF239687 | |
| CAA49575.1 | X69954 | |
| CAB97359.1 | AJ278455 | |
| AAF74018.2 | AF144525 | |
| AAF74016.2 | AF144523 | |
| AAF74019.2 | AF144526 | |
| AAF73997.2 | AF144504 | |
| AAF74022.2 | AF144529 | |
| AAF73995.2 | AF144502 | |
| AAF73994.2 | AF144501 | |
| AAF73996.2 | AF144503 | |
| AAF74004.2 | AF144511 | |
| AAF74002.2 | AF144509 | |
| AAF74020.2 | AF144527 | |
| AAF74017.2 | AF144524 | |
| AAF74008.2 | AF144515 | |
| SEQ ID NO. 1684 | | |

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|-----------------|----------|----------------------------|------------|----------|------------------------------|
| CAA66037.1 | X97351 | Populus balsamifera subsp. | CAB42794.1 | AJ238754 | Citrus clementina x Citrus |
| trichocarpa | | | reticulata | | |
| AAD37430.1 | AF149280 | Phaseolus vulgaris | BAA00886.1 | D10002 | Pisum sativum |
| BAA06335.1 | D30653 | Populus kitakamiensis | BAA00887.1 | D10003 | Pisum sativum |
| CAA66034.1 | X97348 | Populus balsamifera subsp. | AAB67733.1 | U43338 | Citrus limon |
| trichocarpa | | | AAF40224.1 | AF237955 | Rubus idaeus |
| AAB02554.1 | L37790 | Stylosanthes humilis | AAA17993.1 | M91192 | Trifolium subterraneum |
| BAA07241.1 | D38051 | Populus kitakamiensis | CAA57057.1 | X81159 | Petroselinum crispum |
| BAA06334.1 | D30652 | Populus kitakamiensis | AAF40223.1 | AF237954 | Rubus idaeus |
| CAA66036.1 | X97350 | Populus balsamifera subsp. | CAA68938.1 | Y07654 | Petroselinum crispum |
| trichocarpa | | | CAA57056.1 | X81158 | Petroselinum crispum |
| BAA11853.1 | D83225 | Populus nigra | CAB60719.1 | AJ250836 | Cicer arietinum |
| CAB94692.1 | AJ242742 | Ipomoea batatas | CAA05251.1 | AJ002221 | Digitalis lanata |
| BAA92967.1 | AP001551 | Oryza sativa | AAC78457.1 | AF036948 | Prunus avium |
| CAA62226.1 | X90693 | Medicago sativa | BAA23367.1 | D85850 | Daucus carota |
| BAA11852.1 | D83224 | Populus nigra | CAA68256.1 | X99997 | Bromheadia finlaysoniana |
| AAC05277.1 | AF049881 | Linum usitatissimum | AAA33805.1 | L11747 | Populus x generosa |
| BAA77389.1 | AB024439 | Scutellaria baicalensis | BAA24928.1 | D83075 | Lithospermum erythrorhizon |
| AAB47602.1 | L07554 | Linum usitatissimum | CAA34226.1 | X16099 | Oryza sativa subsp. japonica |
| AAC98519.1 | AF007211 | Glycine max | CAA41169.1 | X58180 | Medicago sativa |
| CAA66035.1 | X97349 | Populus balsamifera subsp. | AAA34176.1 | M90692 | Lycopersicon esculentum |
| trichocarpa | | | BAA07860.1 | D43802 | Populus kitakamiensis |
| CAA40796.1 | X57564 | Armoracia rusticana | AAA84889.1 | U39792 | Pinus taeda |
| CAA59487.1 | X85230 | Triticum aestivum | CAA73065.1 | Y12461 | Helianthus annuus |
| AAB48184.1 | L24120 | Linum usitatissimum | BAA95629.1 | AB042520 | Catharanthus roseus |
| BAA08499.1 | D49551 | Oryza sativa | BAA05643.1 | D26596 | Camellia sinensis |
| CAA62227.1 | X90694 | Medicago sativa | BAA24929.1 | D83076 | Lithospermum erythrorhizon |
| AAD37427.1 | AF149277 | Phaseolus vulgaris | BAA21643.1 | D30656 | Populus kitakamiensis |
| AAB06183.1 | M37636 | Arachis hypogaea | CAA37129.1 | X52953 | Glycine max |
| BAA77388.1 | AB024438 | Scutellaria baicalensis | AAA34122.1 | M84466 | Nicotiana tabacum |
| AAC49819.1 | AF014468 | Oryza sativa | BAA22948.1 | AB008200 | Nicotiana tabacum |
| CAA71493.1 | Y10467 | Spinacia oleracea | AAA99500.1 | L36822 | Stylosanthes humilis |
| CAA62597.1 | X91172 | Raphanus sativus | CAB42793.1 | AJ238753 | Citrus clementina x Citrus |
| BAA03911.1 | D16442 | Oryza sativa | reticulata | | |
| AAC49821.1 | AF014470 | Oryza sativa | AAG49585.1 | AF325496 | Ipomoea nil |
| CAA71491.1 | Y10465 | Spinacia oleracea | CAA55075.1 | X78269 | Nicotiana tabacum |
| SEQ ID NO. 1713 | | | BAA22963.1 | D17467 | Nicotiana tabacum |
| BAA00885.1 | D10001 | Pisum sativum | BAA22947.1 | AB008199 | Nicotiana tabacum |
| AAK15640.1 | AF326116 | Agastache rugosa | AAA34179.2 | M83314 | Lycopersicon esculentum |
| | | | BAA11459.1 | D78640 | Ipomoea batatas |
| | | | AAA33389.1 | M29232 | Ipomoea batatas |

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| CAA67575.1 | X99134 | Lycopersicon esculentum | CAA66035.1 | X97349 | Populus balsamifera subsp. |
| CAB40189.1 | AJ133638 | Avena sativa | trichocarpa | | |
| AAD31395.1 | AF114162 | Lolium temulentum | AAB48184.1 | L24120 | Linum usitatissimum |
| BAA88224.1 | AB028652 | Nicotiana tabacum | CAA40796.1 | X57564 | Armoracia rusticana |
| AAB41101.1 | U72762 | Nicotiana tabacum | BAA11852.1 | D83224 | Populus nigra |
| BAA88223.1 | AB028651 | Nicotiana tabacum | CAA59485.1 | X85228 | Triticum aestivum |
| BAA88221.1 | AB028649 | Nicotiana tabacum | AAB97734.1 | AF014502 | Glycine max |
| CAA61021.1 | X87690 | Hordeum vulgare | BAA03911.1 | D16442 | Oryza sativa |
| AAG22863.1 | AY008692 | Hordeum vulgare | AAC49821.1 | AF014470 | Oryza sativa |
| BAA96421.1 | AB044084 | Triticum aestivum | CAA71493.1 | Y10467 | Spinacia oleracea |
| CAA72218.1 | Y11415 | Oryza sativa | CAA66034.1 | X97348 | Populus balsamifera subsp. |
| BAA23341.1 | D88621 | Oryza sativa | trichocarpa | | |
| ARG28526.1 | AF198499 | Nicotiana tabacum | CAA71491.1 | Y10465 | Spinacia oleracea |
| AAG28525.1 | AF198498 | Nicotiana tabacum | AAD37430.1 | AF149280 | Phaseolus vulgaris |
| CAA78386.1 | Z13996 | Petunia x hybrida | CAA66036.1 | X97350 | Populus balsamifera subsp. |
| CAA72187.1 | Y11352 | Oryza sativa | trichocarpa | | |
| SEQ ID NO. 1718 | | | CAA62227.1 | X90694 | Medicago sativa |
| AAA67067.1 | U25430 | Oryza sativa | CAA46916.1 | X66125 | Oryza sativa |
| BAB20681.1 | AB032413 | Spinacia oleracea | BAA92967.1 | AP001551 | Oryza sativa |
| SEQ ID NO. 1719 | | | CAB94692.1 | AJ242742 | Ipomoea batatas |
| BAA92500.1 | AP001383 | Oryza sativa | BAA08499.1 | D49551 | Oryza sativa |
| AAF63027.1 | AF244924 | Spinacia oleracea | AAC49818.1 | AF014467 | Oryza sativa |
| AAF63026.1 | AF244923 | Spinacia oleracea | CAA62597.1 | X91172 | Raphanus sativus |
| CAA62615.1 | X91232 | Mercurialis annua | AAC05277.1 | AF049881 | Linum usitatissimum |
| BAA92422.1 | AP001366 | Oryza sativa | CAA66037.1 | X97351 | Populus balsamifera subsp. |
| AAF63025.1 | AF244922 | Oryza sativa | trichocarpa | | |
| BAA94962.1 | AB042103 | Spinacia oleracea | CAA37713.1 | X53675 | Triticum aestivum |
| BAA82306.1 | AB027752 | Asparagus officinalis | AAD37427.1 | AF149277 | Phaseolus vulgaris |
| AAD43561.1 | AF155124 | Nicotiana tabacum | AAB97854.1 | AF043235 | Striga asiatica |
| BAA77389.1 | AB024439 | Gossypium hirsutum | BAA77388.1 | AB024438 | Scutellaria baicalensis |
| BAA07241.1 | D38051 | Scutellaria baicalensis | CAA62226.1 | X90693 | Medicago sativa |
| AAB06183.1 | M37636 | Populus kitakamiensis | BAA14143.1 | D90115 | Armoracia rusticana |
| CAA71492.1 | Y10466 | Arachis hypogaea | CAA59487.1 | X85230 | Triticum aestivum |
| BAA06334.1 | D30652 | Spinacia oleracea | SEQ ID NO. 1720 | | |
| AAB02554.1 | L37790 | Populus kitakamiensis | AAC49008.1 | U24188 | Lilium longiflorum |
| AAD37428.1 | AF149278 | Stylosanthes humilis | AAD52098.1 | U70923 | Nicotiana tabacum |
| BAA11853.1 | D83225 | Phaseolus vulgaris | AAD28791.1 | AF145593 | Nicotiana tabacum |
| | | Populus nigra | AAD52092.1 | AF087813 | Nicotiana tabacum |
| | | | AAF21450.1 | U38446 | Nicotiana tabacum |
| | | | AAC32116.1 | AF051211 | Picea mariana |

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|-----------------|----------|---------------------|-----------------|----------|-------------------------|
| CAA31519.1 | X13128 | Brassica napus | CAA38252.1 | X54377 | Pisum sativum |
| CAA49803.1 | X70337 | Brassica rapa | AAB99846.1 | AF043099 | Coffea eugenioides |
| CAA68475.1 | Y00418 | Brassica rapa | AAB99844.1 | AF043097 | Coffea canephora |
| AAB21541.1 | S84968 | Brassica rapa | AAB97081.1 | AF042072 | Coffea arabica |
| CAA31514.1 | X13123 | Brassica napus | AAB99845.1 | AF043098 | Coffea congensis |
| AAC39495.1 | AF041386 | Fragaria x ananassa | SEQ ID NO. 1726 | | |
| CAA31518.1 | X13127 | Brassica napus | CAA51227.1 | X72676 | Brassica juncea |
| AAB05224.1 | U48777 | Gossypium hirsutum | AAC83147.1 | AF057563 | Nicotiana glutinosa |
| AAD46394.1 | AF083950 | Coriandrum sativum | CAB60722.1 | AJ012551 | Citrus sinensis |
| CAA71885.1 | Y10994 | Casuarina glauca | CAB60721.1 | AJ012550 | Citrus sinensis |
| AAA32921.1 | M63799 | Hordeum vulgare | AAF97614.1 | U18056 | Lycopersicon esculentum |
| CAA54714.1 | X77620 | Cuphea lanceolata | AAF97615.1 | U18057 | Lycopersicon esculentum |
| AAD21198.1 | AF127796 | Capsicum chinense | CAA67118.1 | X98492 | Nicotiana tabacum |
| AAA32922.1 | M58754 | Hordeum vulgare | AAA33275.1 | M66619 | Dianthus caryophyllus |
| CAA64542.1 | X95253 | Cuphea lanceolata | BAA34923.1 | AB013100 | Lycopersicon esculentum |
| AAA32924.1 | M24426 | Hordeum vulgare | CAB60831.1 | AJ012696 | Citrus sinensis |
| CAA54715.1 | X77621 | Cuphea lanceolata | CAA41855.1 | X59139 | Lycopersicon esculentum |
| AAA32923.1 | M24425 | Hordeum vulgare | CAA41856.1 | X59145 | Lycopersicon esculentum |
| AAA32920.1 | M58753 | Hordeum vulgare | AAC98809.1 | U68216 | Carica papaya |
| CAA54716.1 | X77622 | Cuphea lanceolata | AAB70885.1 | U88971 | Pelargonium x hortorum |
| CAA36288.1 | X52065 | Spinacia oleracea | AAD04199.1 | AF016459 | Pisum sativum |
| CAA41024.1 | X57956 | Zea mays | BAA33375.1 | AB006804 | Cucumis sativus |
| CAA31515.1 | X13124 | Brassica napus | BAB16433.1 | AB041521 | Solanum tuberosum |
| AAA34023.1 | M17636 | Spinacia oleracea | AAC15777.1 | AF061605 | Nicotiana glutinosa |
| AAK00695.1 | AF229423 | Brassica rapa | BAA90549.1 | AB031026 | Prunus mume |
| AAK00698.1 | AF229426 | Brassica oleracea | AAF22109.1 | AF119411 | Lupinus albus |
| AAK00690.1 | AF229418 | Brassica napus | AAC83146.1 | AF057562 | Nicotiana glutinosa |
| AAK00699.1 | AF229427 | Brassica oleracea | CAA09477.1 | AJ011095 | Citrus sinensis |
| AAK00696.1 | AF229424 | Brassica rapa | SEQ ID NO. 1727 | | |
| AAK00697.1 | AF229425 | Brassica oleracea | CAA09853.1 | AJ011893 | Nicotiana tabacum |
| CAA65138.1 | X95895 | Zea mays | CAB60837.1 | AJ002589 | Lycopersicon esculentum |
| AAK00692.1 | AF229420 | Brassica napus | CAB40540.1 | AJ132929 | Medicago sativa |
| AAK00693.1 | AF229421 | Brassica napus | CAA61334.1 | X88864 | Medicago sativa |
| AAK00694.1 | AF229422 | Brassica rapa | BAA33153.1 | AB008188 | Pisum sativum |
| AAK00691.1 | AF229419 | Brassica napus | CAB60836.1 | AJ002588 | Lycopersicon esculentum |
| SEQ ID NO. 1724 | | | CAB51788.1 | AJ245415 | Lycopersicon esculentum |
| CAA85353.1 | Z36879 | Flaveria pringlei | CAA09854.1 | AJ011894 | Nicotiana tabacum |
| CAA91000.1 | Z54239 | Flaveria pringlei | CAB61223.1 | AJ250398 | Antirrhinum majus |
| CAA81076.1 | Z25857 | Flaveria pringlei | CAB61222.1 | AJ250397 | Antirrhinum majus |
| AAB82711.1 | AF024589 | Hordeum x Triticum | | | |

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| CAB60838.1 | AJ002590 | Lycopersicon esculentum | BAA90357.1 | AP001080 | Oryza sativa |
| CAA09769.1 | AJ011776 | Chenopodium rubrum | BAA85438.1 | AP000616 | Oryza sativa |
| CAB40541.1 | AJ132930 | Medicago sativa | BAA90806.1 | AP001168 | Oryza sativa |
| CAA71244.1 | Y10162 | Chenopodium rubrum | SEQ ID NO. 1729 | | |
| CAA09852.1 | AJ011892 | Nicotiana tabacum | AAB94619.1 | AF032386 | Nicotiana tabacum |
| CAB61221.1 | AJ250396 | Antirrhinum majus | SEQ ID NO. 1730 | | |
| CAA63540.1 | X92964 | Nicotiana tabacum | AAB97366.1 | AF039531 | Oryza sativa |
| CAA48675.1 | X68741 | Medicago sativa | SEQ ID NO. 1731 | | |
| CAB46643.1 | AJ243453 | Lycopersicon esculentum | BAA03094.1 | D13987 | Brassica napus |
| BAA86629.1 | AB024987 | Oryza sativa | AAB80714.1 | AF008939 | Gossypium hirsutum |
| BAA20426.1 | D89636 | Nicotiana tabacum | CAA88829.1 | Z48966 | Flaveria pringlei |
| CAB81558.1 | Z37978 | Nicotiana tabacum | AAG17619.1 | AF248080 | Flaveria trinervia |
| CAA63541.1 | X92965 | Pisum sativum | CAA62469.1 | X90982 | Solanum tuberosum |
| CAB77269.1 | AJ133722 | Nicotiana tabacum | CAA47437.1 | X67053 | Solanum tuberosum |
| CAA63753.1 | X93467 | Catharanthus roseus | CAA45505.1 | X64144 | Flaveria pringlei |
| BAA20410.1 | D86385 | Lupinus luteus | AAG17618.1 | AF248079 | Flaveria trinervia |
| AAC61889.1 | U24194 | Lupinus luteus | CAA41758.1 | X59016 | Nicotiana tabacum |
| AAD31790.1 | AF126107 | Lupinus luteus | BAA23419.1 | AB008540 | Glycine max |
| CAA81232.1 | Z26331 | Glycine max | CAB65171.1 | AJ243417 | Lycopersicon esculentum |
| CAA44632.1 | X62820 | Glycine max | AAD31452.1 | AF135371 | Lotus corniculatus |
| CAA44188.1 | X62303 | Glycine max | CAB65170.1 | AJ243416 | Lycopersicon esculentum |
| AAC50013.1 | U50064 | Zea mays | BAA01560.1 | D10717 | Glycine max |
| CAA57556.1 | X82036 | Oryza sativa | AAB18633.1 | L49175 | Amaranthus hypochondriacus |
| BAA09467.1 | D50871 | Glycine max | CAA55700.1 | X79090 | Picea abies |
| CAB46642.1 | AJ243452 | Lycopersicon esculentum | CAC28225.1 | AJ286750 | Sesbania rostrata |
| BAA33154.1 | AB008189 | Pisum sativum | CAA43601.1 | X61304 | Flaveria trinervia |
| AAC24245.1 | U44857 | Lupinus luteus | CAA09807.1 | AJ011844 | Solanum tuberosum |
| AAD31791.1 | AF126108 | Lupinus luteus | CAA61072.1 | Z25853 | Flaveria australasica |
| CAA44631.1 | X62819 | Daucus carota | AAC33164.1 | M86661 | Saccharum sp. |
| BAA20412.1 | D86387 | Catharanthus roseus | BAA03100.1 | D13998 | Glycine max |
| CAA71243.1 | Y10161 | Chenopodium rubrum | CAA92209.1 | Z68125 | Amaranthus hypochondriacus |
| CAA99990.1 | Z75660 | Sesbania rostrata | CAA45504.1 | X64143 | Flaveria trinervia |
| AA51660.1 | L25406 | Brassica napus | AAK28444.1 | AF288382 | Phaseolus vulgaris |
| CAB46644.1 | AJ243454 | Lycopersicon esculentum | CAA31956.1 | X13660 | Mesembryanthemum crystallinum |
| AA20236.1 | U10076 | Zea mays | AAB46618.1 | M83086 | Medicago sativa |
| CAB58998.1 | AJ250315 | Petunia x hybrida | AAB41903.1 | L39371 | Medicago sativa |
| SEQ ID NO. 1728 | | | AAG42288.1 | AF268091 | Chloris gayana |
| AAG43550.1 | AF211532 | Nicotiana tabacum | CAA09588.1 | AJ011302 | Vicia faba |
| BAA78746.1 | AB023482 | Oryza sativa | | | |
| BAA96875.1 | AB045121 | Oryza sativa | | | |

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| D64037 | BAA10902.1 | Pisum sativum |
| AJ007705 | CAA07610.1 | Triticum aestivum |
| AJ223496 | CAA11414.1 | Brassica juncea |
| X59925 | CAA42549.1 | Sorghum bicolor |
| AJ223497 | CAA11415.1 | Brassica juncea |
| X61489 | CAA43709.1 | Zea mays |
| AF271995 | AAG00180.1 | Oryza sativa |
| X15239 | CAA33317.1 | Zea mays |
| X65137 | CAA46267.1 | Sorghum bicolor |
| X55664 | CAA39197.1 | Sorghum bicolor |
| AB012228 | BAA28170.1 | Zea mays |
| X15238 | CAA33316.1 | Zea mays |
| X15642 | CAA33663.1 | Zea mays |
| X14588 | CAA32728.2 | Mesembryanthemum crystallinum |
| AF159051 | AAD45696.1 | Picea abies |
| X87148 | CAA60626.1 | Vanilla planifolia |
| X87149 | CAA60627.1 | Vanilla planifolia |
| X91404 | CAA62747.1 | Welwitschia mirabilis |
| SEQ ID NO. | 1732 | |
| AAD26116.1 | AF106954 | Brassica napus |
| CAB51533.1 | AJ237693 | Ajuga reptans |
| CAB51534.1 | AJ237694 | Ajuga reptans |
| AAD55726.1 | AF178569 | Vitis riparia |
| SEQ ID NO. | 1735 | |
| BAA94601.1 | AB0333504 | Populus euramericana |
| AAA33697.1 | L21978 | Petunia x hybrida |
| AAC48977.1 | U07953 | Pelargonium x hortorum |
| CAAS44449.1 | X77232 | Prunus persica |
| AAF36483.1 | AF129073 | Prunus persica |
| AAC33524.1 | AF026793 | Prunus armeniaca |
| AAB70884.1 | U67861 | Pelargonium x hortorum |
| AAG49361.1 | AF321533 | Citrus sinensis |
| BAAR90550.1 | AB031027 | Prunus mume |
| AAA99792.1 | U54565 | Nicotiana glutinosa |
| AAB05171.1 | U62764 | Nicotiana glutinosa |
| AAC37381.1 | L21976 | Petunia x hybrida |
| CAAT71738.1 | Y10749 | Betula pendula |
| CAAB6468.1 | Z46349 | Nicotiana tabacum |
| PAAB3466.1 | AB012857 | Nicotiana tabacum |
| U68215 | AAC98808.1 | Carica papaya |
| D31727 | BAA06526.1 | Cucumis melo |
| X95551 | CAA64797.1 | Cucumis melo |
| X83229 | CAA58232.1 | Nicotiana tabacum |
| AB013101 | BAA34924.1 | Lycopersicon esculentum |
| AF254125 | AAF64528.1 | Carica papaya |
| L21979 | AAA33698.1 | Petunia x hybrida |
| X58273 | CAA41212.1 | Lycopersicon esculentum |
| AB003514 | BAA21541.1 | Actinidia deliciosa |
| L29405 | AAB71421.1 | Helianthus annuus |
| U54566 | AAA99793.1 | Nicotiana glutinosa |
| AF129074 | AAF36484.1 | Prunus persica |
| X95553 | CAA64799.1 | Cucumis melo |
| Z54199 | CAA90904.1 | Lycopersicon esculentum |
| Y00478 | CAA68538.1 | Lycopersicon esculentum |
| AF053354 | AAC12934.1 | Phaseolus vulgaris |
| U19856 | AAB70883.1 | Pelargonium x hortorum |
| AF033582 | AAC67233.1 | Cucumis sativus |
| AB006806 | BAA33377.1 | Cucumis sativus |
| AB006807 | BAA33378.1 | Cucumis sativus |
| Y10034 | CAA71140.1 | Rumex palustris |
| M98357 | AAA33644.1 | Pisum sativum |
| U06046 | AAC48921.1 | Vigna radiata |
| AF315316 | AAK07883.1 | Vigna radiata |
| L35152 | AAA33273.1 | Dianthus caryophyllus |
| Y14005 | CAA74328.1 | Malus x domestica |
| SEQ ID NO. | 1736 | |
| AAG35777.1 | AF273844 | Brassica oleracea var. |
| alboglabra | | |
| AAB53694.1 | U59379 | Brassica napus |
| BAA25681.1 | AB010434 | Brassica rapa |
| BAB20886.1 | AB053294 | Oryza sativa |
| AAB53695.1 | U59380 | Brassica napus |
| AAF88067.1 | AF286593 | Triticum aestivum |
| CAA94534.1 | Z70677 | Ricinus communis |
| CAA05081.1 | AJ001903 | Triticum turgidum subsp. durum |
| BAA13524.1 | D87984 | Fagopyrum esculentum |
| CAA41415.1 | X58527 | Nicotiana tabacum |
| CAA77847.1 | Z11803 | Nicotiana tabacum |
| AAC32111.1 | AF051206 | Picea mariana |

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|-----------------|----------|-------------------------------|-----------------|----------|---------------------------------|
| AAA80651.1 | U27116 | Populus tremuloides | BAA94510.1 | AB041504 | Populus nigra |
| AAC08395.1 | AF053553 | Mesembryanthemum crystallinum | AAC27895.1 | AF023165 | Zea mays |
| CAA12200.1 | AJ224896 | Populus balsamifera subsp. | AAF91337.1 | AF249318 | Glycine max |
| trichocarpa | | | AAF91336.1 | AF249317 | Glycine max |
| CAA12199.1 | AJ224895 | Populus balsamifera subsp. | CAB51834.1 | 00069 | Oryza sativa |
| trichocarpa | | | AAB09771.1 | U67422 | Zea mays |
| CAA11495.1 | AJ223620 | Populus balsamifera subsp. | AAC61805.1 | U28007 | Lycopersicon esculentum |
| trichocarpa | | | AAK21965.1 | AY028699 | Brassica napus |
| AAD50443.1 | AF168780 | Eucalyptus globulus | AAG03090.1 | AC073405 | Oryza sativa |
| AAF44689.1 | AF240466 | Populus tomentosa | AAF34428.1 | AF172282 | Oryza sativa |
| AAC49913.1 | U38612 | Nicotiana tabacum | AAG25966.1 | AF302082 | Nicotiana tabacum |
| CAA72911.1 | Y12228 | Eucalyptus gunnii | AAF66615.1 | AF142596 | Nicotiana tabacum |
| AAC49916.1 | U62736 | Nicotiana tabacum | CAB51836.1 | AJ243961 | Oryza sativa |
| BAA78733.1 | AB023482 | Oryza sativa | CAA97692.1 | Z73295 | Catharanthus roseus |
| CAA91228.1 | Z56282 | Nicotiana tabacum | BAA84787.1 | AP000559 | Oryza sativa |
| AAC49914.1 | U62734 | Nicotiana tabacum | BAA83373.1 | AP000391 | Oryza sativa |
| AAC26191.1 | AF046122 | Eucalyptus globulus | AAF76313.1 | AF220603 | Lycopersicon esculentum |
| AAC49915.1 | U62735 | Nicotiana tabacum | AAB47421.1 | U59316 | Lycopersicon esculentum |
| AAD02050.1 | AF036095 | Pinus taeda | CAA79355.1 | Z18921 | Brassica oleracea |
| AAK16714.1 | AF327458 | Populus alba x Populus | AAA33915.1 | L27821 | Oryza sativa |
| glandulosa | | | BAA95893.1 | AP002071 | Oryza sativa |
| CAB45150.1 | AJ242981 | Zea mays | AAC36318.1 | AF053127 | Malus x domestica |
| CAB45149.1 | AJ242980 | Zea mays | | | |
| AAB61680.1 | L22203 | Stellaria longipes | SEQ ID NO. 1742 | | |
| BAA88234.1 | AB035144 | Citrus natsudaiddai | AAK27157.1 | AF349449 | Brassica juncea |
| BAA81776.1 | AP000364 | Oryza sativa | AAD28177.1 | AF109694 | Brassica juncea |
| BAA81774.1 | AP000364 | Oryza sativa | AAB70837.1 | AF019907 | Vitis vinifera |
| BAA81777.1 | AP000364 | Oryza sativa | CAA53925.1 | X76293 | Nicotiana tabacum |
| CAA10217.1 | AJ130841 | Populus balsamifera subsp. | AAF26175.1 | AF105199 | Glycine max |
| trichocarpa | | | AAA33962.1 | L11632 | Glycine max |
| AAD50441.1 | AF168778 | Eucalyptus globulus | CAA42921.1 | X60373 | Pisum sativum |
| AAD50442.1 | AF168779 | Eucalyptus globulus | CAA62482.1 | X90996 | Pisum sativum |
| AAC15067.1 | AF060180 | Nicotiana tabacum | CAA54043.1 | X76533 | Nicotiana tabacum |
| | | | CAA53993.1 | X76455 | Nicotiana tabacum |
| SEQ ID NO. 1741 | | | CAA06835.1 | AJ006055 | Zea mays |
| BAA78764.1 | AB023482 | Oryza sativa | CAA66924.1 | X98274 | Pisum sativum |
| AAF43496.1 | AF131222 | Lophopyrum elongatum | BAA36283.1 | D85751 | Oryza sativa |
| AAK11674.1 | AF339747 | Lophopyrum elongatum | BAA37092.1 | AB009592 | Oryza sativa |
| AAK16628.1 | AY007545 | Brassica napus | BAA07108.1 | D37870 | Spinacia oleracea |
| AAC27894.1 | AF023164 | Zea mays | AAF67753.1 | AF255651 | Brassica rapa subsp. pekinensis |
| BAA94509.1 | AB041503 | Populus nigra | AAC49980.2 | AF008441 | Brassica rapa |

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| CAC13956.1 | AJ400816 | Mesembryanthemum crystallinum | BAA20074.1 | AB002147 | Nicotiana excelsior |
| CAB66332.1 | AJ279690 | Betula pendula | BAA81820.1 | AB029325 | Oryza sativa |
| AAC26053.1 | AF074940 | Glycine max | AAB67870.1 | U60149 | Beta vulgaris |
| AAB30526.1 | S70187 | Glycine max | AAB18228.1 | U73467 | Mesembryanthemum crystalli |
| AAD53185.1 | AF181096 | Vigna unguiculata | CAB46350.1 | Y18311 | Solanum tuberosum |
| AAD28178.1 | AF109695 | Brassica juncea | BAA24016.1 | AB009665 | Oryza sativa |
| BAA05408.1 | D26392 | Cucumis sativus | CAA04652.1 | AJ001292 | Craterostigma plantagineum |
| AAC41654.1 | L41345 | Lycopersicon esculentum | SEQ ID NO. 1746 | | |
| | | | CAB76364.1 | AJ133371 | Cucumis sativus |
| SEQ ID NO. 1743 | | | SEQ ID NO. 1747 | | |
| CAA82945.1 | Z30243 | Secale cereale | BAB21153.1 | AP002899 | Oryza sativa |
| AAA33748.1 | M99431 | Ipomoea nil | AAC49181.1 | U39289 | Brassica napus |
| BAA90487.1 | AB037681 | Oryza sativa | BAA94228.1 | AP001633 | Oryza sativa |
| CAA77978.1 | Z11920 | Oryza sativa | AAC49182.1 | U39319 | Brassica napus |
| AAA16785.1 | L14594 | Catharanthus roseus | BAA94236.1 | AP001633 | Oryza sativa |
| AAB01376.1 | M96549 | Lycopersicon esculentum | BAA94219.1 | AP001633 | Oryza sativa |
| AAD11549.1 | U55859 | Triticum aestivum | BAA94224.1 | AP001633 | Oryza sativa |
| AAB26482.2 | S59780 | Zea mays | BAA94215.1 | AP001633 | Oryza sativa |
| CAA44877.1 | X63195 | Nicotiana tabacum | SEQ ID NO. 1749 | | |
| AAD30456.1 | AF123259 | Lycopersicon esculentum | CAA65064.1 | X95753 | Antirrhinum majus |
| AAF31705.1 | AF221856 | Euphorbia esula | SEQ ID NO. 1750 | | |
| AAC32131.1 | AF051230 | Picea mariana | AAD21872.1 | AF078082 | Phaseolus vulgaris |
| AAD11550.1 | U55860 | Triticum aestivum | CAA73134.1 | Y12531 | Brassica oleracea |
| SEQ ID NO. 1744 | | | AAB93834.1 | U82481 | Zea mays |
| AAD41796.1 | AF135862 | Glycine max | AAC23542.1 | U20948 | Ipomoea trifida |
| BAA95630.1 | AB042521 | Oryza sativa | CAA73133.1 | Y12530 | Brassica oleracea |
| AAA74361.1 | L33913 | Zea mays | CAA67145.1 | X98520 | Brassica napus |
| BAA11417.1 | D78573 | Oryza sativa | AAA62232.1 | U00443 | Brassica oleracea |
| AAC05983.1 | AF049708 | Glycine max | CAA74661.1 | Y14285 | Brassica oleracea |
| AAC05981.1 | AF049706 | Chloroplast Glycine max | CAB41879.1 | Y18260 | Brassica oleracea |
| AAA74360.1 | L33912 | Zea mays | AAA33000.1 | M76647 | Brassica oleracea |
| AAA16972.1 | L11529 | Daucus carota | BAA92836.1 | AB032473 | Brassica oleracea |
| SEQ ID NO. 1745 | | | BAA23676.1 | AB000970 | Brassica rapa |
| AAF82791.1 | AF275316 | Lotus japonicus | CAA74662.1 | Y14286 | Brassica oleracea |
| CAB45652.1 | AJ243308 | Pisum sativum | AAA33008.1 | M97667 | Brassica napus |
| BAA04257.1 | D17443 | Oryza sativa | CAB89179.1 | AJ245479 | Brassica napus subsp. napus |
| CAB40742.1 | AJ237751 | Nicotiana tabacum | CAB41878.1 | Y18259 | Brassica oleracea |
| AAF61465.1 | AF139816 | Triticum aestivum | | | |
| BAB40142.1 | AB058679 | Pyrus communis | | | |

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| CAA79355.1 | Z18921 | Brassica oleracea | AAC84001.1 | AF063248 | Picea abies |
| BAA21132.1 | D88193 | Brassica rapa | AAC33008.1 | AF080104 | Pisum sativum |
| BAA06285.1 | D30049 | Brassica rapa | AAD00692.1 | U90092 | Picea mariana |
| BAA92837.1 | AB032474 | Brassica oleracea | AAC32262.1 | AF063307 | Pisum sativum |
| BAB21001.1 | AB054061 | Brassica rapa | BAA03959.1 | D16507 | Oryza sativa |
| BAA07577.2 | D38564 | Brassica rapa | AAG27464.1 | AF308454 | Medicago truncatula |
| BAA07576.1 | D38563 | Brassica rapa | AAD00691.1 | U90091 | Picea mariana |
| AAD52097.1 | AF088885 | Nicotiana tabacum | AAC32817.1 | AF050180 | Oryza sativa |
| AAK21965.1 | AY028699 | Brassica napus | BAA79226.1 | AB028885 | Oryza sativa |
| AAG16628.1 | AY007545 | Brassica napus | BAA79224.1 | AB028883 | Oryza sativa |
| AAG03090.1 | AC073405 | Oryza sativa | BAA77818.1 | AB007624 | Oryza sativa |
| CAB51836.1 | AJ243961 | Oryza sativa | AAF23753.2 | AF193813 | Brassica oleracea |
| BAA94509.1 | AB041503 | Populus nigra | AAD00251.1 | U76407 | Lycopersicon esculentum |
| AAA33915.1 | L27821 | Oryza sativa | CAA96510.1 | Z71978 | Malus x domestica |
| | | | BAA31688.1 | AB016071 | Oryza sativa |
| | | | BAA77817.1 | AB007623 | Oryza sativa |
| | | Vitis riparia | BAB18582.1 | AB043954 | Ceratopteris richardii |
| | | | BAA76903.1 | AB025713 | Nicotiana tabacum |
| | | | AAD00252.1 | U76408 | Lycopersicon esculentum |
| | | Capsicum chacoense | BAB18584.1 | AB043956 | Ceratopteris richardii |
| | | Solanum tuberosum | CAA96511.1 | Z71979 | Malus x domestica |
| | | | AAA20882.1 | L13663 | Glycine max |
| | | | CAB88029.1 | AJ276389 | Dendrobium grex Madame Thong-In |
| SEQ ID NO. 1753 | | | | | |
| AAF37267.1 | AF2220406 | | | | |
| SEQ ID NO. 1755 | | | | | |
| AAF09256.1 | AF202179 | | | | |
| CAB50786.1 | AJ011801 | | | | |
| SEQ ID NO. 1758 | | | | | |
| CAA96512.1 | Z71980 | Malus x domestica | SEQ ID NO. 1759 | | |
| BAA25921.1 | AB004797 | Nicotiana tabacum | AAAB71417.1 | U81287 | Pisum sativum |
| AAD09582.1 | U76409 | Lycopersicon esculentum | BAA22083.1 | D28862 | Nicotiana sylvestris |
| AAC49918.1 | AF000142 | Lycopersicon esculentum | CAA05729.1 | AJ002894 | Oryza sativa |
| BAA08552.1 | D49704 | Oryza sativa | BAA05170.1 | D26182 | Nicotiana sylvestris |
| BAB18585.1 | AB043957 | Ceratopteris richardii | CAA40862.1 | X57662 | Sorghum bicolor |
| AAD00253.1 | U76410 | Lycopersicon esculentum | AAAB07749.1 | U49482 | Hordeum vulgare |
| CAA82314.1 | Z29073 | Brassica napus | AAA75104.1 | U32310 | Triticum aestivum |
| BAA77822.1 | AB007628 | Oryza sativa | AAG23220.1 | AF310215 | Sorghum bicolor |
| BAA77823.1 | AB007629 | Oryza sativa | CAA88558.1 | Z48624 | Hordeum vulgare |
| AAB81079.1 | AF022390 | Hordeum vulgare | CAA78513.1 | Z14143 | Brassica napus |
| AAF32399.1 | AF224499 | Triticum aestivum | AAAB8616.1 | AF034945 | Zea mays |
| BAA76750.1 | AB025573 | Nicotiana tabacum | CAA41152.1 | X58146 | Daucus carota |
| AAF32400.1 | AF224500 | Triticum aestivum | AAA59213.1 | L31377 | Sinapis alba |
| AAC49917.1 | AF000141 | Lycopersicon esculentum | BAA03742.1 | D16205 | Nicotiana sylvestris |
| BAA25546.1 | AB004785 | Nicotiana tabacum | AAC50020.1 | AF005359 | Nicotiana glutinosa |
| AAF32398.1 | AF224498 | Triticum aestivum | AAAB66884.1 | AF010579 | Oryza sativa |
| AAD13611.1 | AF100455 | Zea mays | | | |

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| AAA59212.1 | L31374 | Sinapis alba | AAC61839.1 | AF025430 | Papaver somniferum |
| CAA05728.1 | AJ002893 | Oryza sativa | SEQ ID NO. 1766 | | |
| AAC61786.1 | AF036339 | Euphorbia esula | AAF19196.1 | AF206320 | Musa acuminata |
| AAB63582.1 | AF009004 | Pelargonium x hortorum | AAF63756.1 | AF243475 | Vitis vinifera |
| AAB63581.1 | AF009003 | Pelargonium x hortorum | AAF19195.1 | AF206319 | Musa acuminata |
| BAA03741.1 | D16204 | Nicotiana sylvestris | CAA63496.1 | X92943 | Musa acuminata |
| BAA66885.1 | AF010580 | Oryza sativa | CAA70735.1 | Y09541 | Zinnia elegans |
| AAB63589.1 | AF009411 | Oryza sativa | AAB71208.1 | Y63550 | Fragaria x ananassa |
| AAD48471.1 | AF169205 | Glycine max | AAB86241.1 | U41472 | Medicago sativa |
| CAA43431.1 | X61121 | Zea mays | CAA47630.1 | X67158 | Nicotiana tabacum |
| BAA92156.1 | AB007819 | Citrus unshiu | CAA43414.1 | X61102 | Nicotiana tabacum |
| BAA03743.1 | D16206 | Nicotiana sylvestris | CAA43413.1 | X61101 | Nicotiana tabacum |
| AAC61787.1 | AF031933 | Euphorbia esula | CAA47631.1 | X67159 | Nicotiana tabacum |
| AAB65412.1 | AF011331 | Oryza sativa | SEQ ID NO. 1767 | | |
| CAA40863.1 | X57663 | Sorghum bicolor | AAD55566.1 | AF110784 | Volvox carteri f. nagariensis |
| AAB61213.1 | AF001894 | Oryza sativa | AAD02069.1 | AF036939 | Chlamydomonas reinhardtii |
| AAF06329.1 | AF191305 | Medicago sativa | AAC49896.1 | AF027727 | Chlamydomonas reinhardtii |
| AAK01176.1 | AF315811 | Triticum aestivum | AAD28260.1 | AF131223 | Datisca glomerata |
| BAA12064.1 | D83696 | Nicotiana sylvestris | AAA19660.1 | U11496 | Triticum aestivum |
| CAA46233.1 | X65117 | Nicotiana plumbaginifolia | CAC21230.1 | AJ277379 | Triticum turgidum subsp. durum |
| AAA79045.1 | U34742 | Spinacia oleracea | CAC21228.1 | AJ277377 | Triticum turgidum subsp. durum |
| SEQ ID NO. 1760 | | | CAAB05641.1 | U41385 | Ricinus communis |
| CAA69336.1 | Y08680 | Alnus glutinosa | CAA77575.1 | Z11499 | Medicago sativa |
| AAB80947.1 | AF022915 | Triticum aestivum | CAC21231.1 | AJ277380 | Triticum turgidum subsp. durum |
| SEQ ID NO. 1762 | | | CAC21229.1 | AJ277378 | Triticum turgidum subsp. durum |
| AAD17487.1 | AF049347 | Berberis stolonifera | BAB16780.1 | AB047268 | Cucumis sativus |
| AAB20352.1 | S65550 | Eschscholzia californica | BAA92322.1 | AB039278 | Oryza sativa |
| AAC39358.1 | AF005655 | Eschscholzia californica | CAA72092.1 | Y11209 | Nicotiana tabacum |
| AAC61839.1 | AF025430 | Papaver somniferum | SEQ ID NO. 1769 | | |
| SEQ ID NO. 1763 | | | AAF74566.1 | AF215852 | Nicotiana tabacum |
| BAA96221.1 | AP002094 | Oryza sativa | AAG43998.1 | AF215837 | Apium graveolens var. dulce |
| AAD32141.1 | AF123503 | Nicotiana tabacum | AAF74565.1 | AF215851 | Spinacia oleracea |
| CAA42636.1 | X60033 | Glycine max | AAF74568.1 | AF215854 | Zea mays |
| SEQ ID NO. 1765 | | | AAF74567.1 | AF215853 | Solanum tuberosum |
| AAD17487.1 | AF049347 | Berberis stolonifera | CAA47324.1 | X66856 | Nicotiana tabacum |
| AAB20352.1 | S65550 | Eschscholzia californica | CAA04511.1 | AJ001061 | Vitis vinifera |
| AAC39358.1 | AF005655 | Eschscholzia californica | AAB06594.1 | U38651 | Medicago truncatula |
| | | | CAA09419.1 | AJ010942 | Lycopersicon esculentum |

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| CAB52689.1 | AJ132224 | Lycopersicon esculentum | AAC97157.1 | U69482 | Picea mariana |
| CAA70777.1 | Y09590 | Vitis vinifera | AAC97146.1 | U46582 | Picea mariana |
| BAB19864.1 | AB052885 | Oryza sativa | AAD09342.1 | AF023615 | Pinus radiata |
| CAA68813.1 | Y07520 | Chlorella kessleri | AAF04972.1 | AF091458 | Oryza sativa |
| CAA39036.1 | X55349 | Chlorella kessleri | AAK21254.1 | AF335241 | Petunia x hybrida |
| CAA53192.1 | X75440 | Chlorella kessleri | AAB00081.1 | L46400 | Zea mays |
| BAB19863.1 | AB052884 | Oryza sativa | AAD10626.1 | AF035379 | Lolium temulentum |
| CAB06079.1 | Z83829 | Picea abies | CAB97354.1 | AJ249146 | Hordeum vulgare |
| BAB19862.1 | AB052883 | Oryza sativa | AAA99964.1 | L37528 | Oryza sativa |
| AAD55054.1 | AF173655 | Beta vulgaris | AAD10625.1 | AF035378 | Lolium temulentum |
| CAB52688.1 | AJ132223 | Lycopersicon esculentum | AAB64250.1 | U78782 | Oryza sativa |
| BAA85398.1 | AP000615 | Oryza sativa | SEQ ID NO. 1778 | | |
| CAB52690.1 | AJ132225 | Lycopersicon esculentum | CAA56123.1 | X79675 | Nicotiana tabacum |
| CAC28219.1 | AJ286744 | Sesbania rostrata | CAA51273.2 | X72743 | Populus x generosa |
| AAB81347.1 | AF000355 | Medicago truncatula | AAA73555.1 | L36436 | Glycine max |
| AAB81346.1 | AF000354 | Medicago truncatula | AAA34264.1 | M60599 | Triticum aestivum |
| AAK01938.1 | AY026321 | Lupinus albus | AAA34263.1 | M60598 | Triticum aestivum |
| BAB21562.1 | AB042951 | Nicotiana tabacum | AAB04021.1 | U61730 | Coix lacryma-jobi |
| SEQ ID NO. 1772 | | | AAF44718.1 | L77616 | Oryza sativa |
| BAB08199.1 | AP002539 | Oryza sativa | CAA37038.1 | X52850 | Zea mays |
| BAA96760.1 | AP002521 | Oryza sativa | CAA55659.1 | X79060 | Nicotiana sylvestris |
| SEQ ID NO. 1776 | | | SEQ ID NO. 1780 | | |
| AAB41526.1 | U25696 | Sinapis alba | AAD09343.1 | AF026538 | Hordeum vulgare |
| CAA53782.1 | X76188 | Nicotiana tabacum | SEQ ID NO. 1783 | | |
| AAC33475.1 | AF082531 | Pimpinella brachycarpa | AAC49528.1 | U56834 | Petroselinum crispum |
| AAK21257.1 | AF335244 | Petunia x hybrida | AAC49527.1 | U48831 | Petroselinum crispum |
| AAK21251.1 | AF335238 | Petunia x hybrida | AAD27591.1 | AF121354 | Petroselinum crispum |
| AAK21252.1 | AF335239 | Petunia x hybrida | SEQ ID NO. 1785 | | |
| AAG43199.1 | AF112148 | Zea mays | AAG35658.1 | AF204925 | Petroselinum crispum |
| AAK21253.1 | AF335240 | Petunia x hybrida | BAA87058.1 | AB028022 | Nicotiana tabacum |
| BAA81886.1 | AB003328 | Oryza sativa | BAA86031.1 | AB026890 | Nicotiana tabacum |
| AAF19968.1 | AF207699 | Elaeis guineensis | AAD16139.1 | AF096299 | Nicotiana tabacum |
| AAD38369.1 | AF141965 | Oryza sativa | BAA77383.1 | AB020590 | Nicotiana tabacum |
| AAB58907.1 | U76726 | Pinus radiata | AAF23898.1 | AF193802 | Oryza sativa |
| AAG43200.1 | AF112150 | Zea mays | AAD55974.1 | AF121353 | Petroselinum crispum |
| BAA85630.1 | AB022665 | Gnetum parvifolium | BAA82107.1 | AB022693 | Nicotiana tabacum |
| CAB56800.1 | AJ011675 | Oryza sativa | BAB16432.1 | AB041520 | Nicotiana tabacum |
| AAD01266.1 | AF006210 | Pinus resinosa | | | |
| AAK97158.1 | U69483 | Picea mariana | | | |

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| CAA83941.1 | Z33875 | Mentha x piperita | BAB41022.1 | AB047095 | Vitis vinifera |
| CAB56503.1 | AJ238612 | Catharanthus roseus | BAB41019.1 | AB047092 | Vitis vinifera |
| AAD44150.1 | AF124815 | Mentha spicata | AAB81682.1 | AF000371 | Vitis vinifera |
| CAB43505.1 | AJ239051 | Cicer arietinum | BAB41025.1 | AB047098 | Vitis vinifera |
| CAB56742.1 | AJ249800 | Cicer arietinum | BAB41023.1 | AB047096 | Vitis vinifera |
| BAB40322.1 | AB036772 | Triticum aestivum | BAB41021.1 | AB047094 | Vitis vinifera |
| AAF34530.1 | AF195809 | Vigna radiata | BAB41026.1 | AB047099 | Vitis vinifera |
| AAF45142.1 | AF195818 | Glycine max | BAB41024.1 | AB047097 | Vitis vinifera |
| AAF34533.1 | AF195812 | Pisum sativum | BAB41018.1 | AB047091 | Vitis labrusca x Vitis vin |
| BAA93634.1 | AB025016 | Lotus japonicus | BAA19659.1 | AB002818 | Perilla frutescens |
| AAF34536.1 | AF195815 | Trifolium repens | BAA89008.1 | AB027454 | Petunia x hybrida |
| AAD38929.1 | AF135484 | Glycine max | AAB86473.1 | AF028237 | Ipomoea purpurea |
| AAB94591.1 | AF022462 | Glycine max | SEQ ID NO. 1807 | | |
| AAF45143.1 | AF195819 | Glycine max | AAA59212.1 | L31374 | Sinapis alba |
| AAF34532.1 | AF195811 | Trifolium pratense | AAA59213.1 | L31377 | Sinapis alba |
| AAF34531.1 | AF195810 | Trifolium pratense | CAA78513.1 | Z14143 | Brassica napus |
| AAF34529.1 | AF195808 | Vigna radiata | CAA40862.1 | X57662 | Sorghum bicolor |
| AAF34528.1 | AF195807 | Vigna radiata | AAG23220.1 | AF310215 | Sorghum bicolor |
| AAA17732.1 | IL19074 | Catharanthus roseus | CAA41152.1 | X58146 | Daucus carota |
| SEQ ID NO. 1802 | | | AAB66884.1 | AF010579 | Oryza sativa |
| AAF61647.1 | AF190634 | Nicotiana tabacum | AAB63582.1 | AF009004 | Pelargonium x hortorum |
| BAA36423.1 | AB013598 | Verbena x hybrida | AAB63581.1 | AF009003 | Pelargonium x hortorum |
| BAA89009.1 | AB027455 | Petunia x hybrida | AAD48471.1 | AF169205 | Glycine max |
| BAA36421.1 | AB013596 | Perilla frutescens | AAB07749.1 | U49482 | Hordeum vulgare |
| BAA93039.1 | AB033758 | Citrus unshiu | BAA03741.1 | D16204 | Nicotiana sylvestris |
| BAA36422.1 | AB013597 | Perilla frutescens | CAA88558.1 | Z48624 | Hordeum vulgare |
| AAF98390.1 | AF287143 | Brassica napus | AAC61786.1 | AF036339 | Euphorbia esula |
| AAF17077.1 | AF199453 | Sorghum bicolor | AAA75104.1 | U32310 | Triticum aestivum |
| AAB36653.1 | U32644 | Nicotiana tabacum | BAA92156.1 | AB007819 | Citrus unshiu |
| AAK28303.1 | AF346431 | Nicotiana tabacum | BAA03742.1 | D16205 | Nicotiana sylvestris |
| BAA83484.1 | AB031274 | Scutellaria baicalensis | AAC50020.1 | AF005359 | Nicotiana glutinosa |
| AAD21086.1 | AF127218 | Forsythia x intermedia | AAB63589.1 | AF009411 | Oryza sativa |
| AAB36652.1 | U32643 | Nicotiana tabacum | CAA05728.1 | AJ002893 | Oryza sativa |
| AAK28304.1 | AF346432 | Nicotiana tabacum | AAB66885.1 | AF010580 | Oryza sativa |
| CAA59450.1 | X85138 | Lycopersicon esculentum | BAA03743.1 | D16206 | Nicotiana sylvestris |
| CAB56231.1 | Y18871 | Dorotheanthus bellidiformis | AAC61787.1 | AF031933 | Euphorbia esula |
| BAA12737.1 | D85186 | Gentiana triflora | CAA43431.1 | X61121 | Zea mays |
| BAB41017.1 | AB047090 | Vitis labrusca x Vitis vinifera | AAB65412.1 | AF011331 | Oryza sativa |
| AAB81683.1 | AF000372 | Vitis vinifera | AAB88616.1 | AF034945 | Zea mays |
| BAB41020.1 | AB047093 | Vitis vinifera | AAB61213.1 | AF001894 | Oryza sativa |

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|-----------------|----------|----------------------|-----------------|----------|---------------------------------|
| AAF06329.1 | AF191305 | Medicago sativa | BAB32871.1 | AB056063 | Oryza sativa |
| BAA12064.1 | D83696 | Nicotiana sylvestris | CAA50719.1 | X71900 | Lycopersicon esculentum |
| AAK01176.1 | AF315811 | Triticum aestivum | SEQ ID NO. 1811 | | |
| CAA05729.1 | AJ002894 | Oryza sativa | AAB50679.1 | S80863 | Rosa hybrid cultivar |
| AAK1417.1 | U81287 | Pisum sativum | BAA23136.1 | D49385 | Rosa hybrid cultivar |
| BAA22083.1 | D28862 | Nicotiana sylvestris | BAA23135.1 | D49384 | Rosa hybrid cultivar |
| | | | BAA23134.1 | D49383 | Rosa hybrid cultivar |
| | | | AAG28599.1 | AF247133 | Limnathes douglasii |
| SEQ ID NO. 1808 | | | SEQ ID NO. 1812 | | |
| AAB00554.1 | U54703 | Phaseolus vulgaris | AAF17077.1 | AF199453 | Sorghum bicolor |
| CAA78515.1 | Z14145 | Pisum sativum | AAF61647.1 | AF190634 | Nicotiana tabacum |
| AAB53203.1 | U69633 | Solanum tuberosum | AAF98390.1 | AF287143 | Brassica napus |
| AAD02259.1 | AF043093 | Hordeum vulgare | BAA93039.1 | AB033758 | Citrus unshiu |
| AAF01696.1 | AF181458 | Hordeum vulgare | BAA89009.1 | AB027455 | Petunia x hybrida |
| AAB18202.1 | U73211 | Triticum aestivum | BAA36421.1 | AB013596 | Perilla frutescens |
| AAB18201.1 | U73210 | Triticum aestivum | BAB41018.1 | AB047091 | Vitis labrusca x Vitis vinifera |
| AAC02689.1 | AF044584 | Lavatera thuringiaca | BAA83484.1 | AB031274 | Scutellaria baicalensis |
| CAB93666.1 | AJ289610 | Pinus sylvestris | BAB41026.1 | AB047099 | Vitis vinifera |
| AAD02252.1 | AF043086 | Hordeum vulgare | BAB41024.1 | AB047097 | Vitis vinifera |
| AAF01699.1 | AF181461 | Hordeum vulgare | BAB41020.1 | AB047093 | Vitis vinifera |
| AAD50291.1 | AF172263 | Prunus dulcis | BAB41022.1 | AB047095 | Vitis vinifera |
| CAA09421.1 | AJ010944 | Helianthus annuus | BAB41019.1 | AB047092 | Vitis vinifera |
| CAA05713.1 | AJ002741 | Helianthus annuus | BAB41025.1 | AB047098 | Vitis vinifera |
| AAF60172.1 | AF236067 | Elaeis guineensis | BAB41023.1 | AB047096 | Vitis vinifera |
| AAA19693.1 | U11696 | Sorghum bicolor | BAB41021.1 | AB047094 | Vitis vinifera |
| AAB71225.1 | AF004807 | Glycine max | AAD21086.1 | AF127218 | Forsythia x intermedia |
| AAB05927.1 | U63831 | Sorghum bicolor | BAB41017.1 | AB047090 | Vitis labrusca x Vitis vinifera |
| CAA63339.1 | X92647 | Helianthus annuus | AAK81682.1 | AF000371 | Vitis vinifera |
| CAA33364.1 | X15290 | Zea mays | AAK81683.1 | AF000372 | Vitis vinifera |
| CAA66970.1 | X98326 | Hordeum vulgare | BAA36423.1 | AB013598 | Verbena x hybrida |
| CAA33363.1 | X15289 | Hordeum vulgare | BAA36422.1 | AB013597 | Perilla frutescens |
| SEQ ID NO. 1810 | | | AAK36652.1 | U32643 | Nicotiana tabacum |
| AAA33710.1 | L16977 | Petunia x hybrida | AAK28304.1 | AF346432 | Nicotiana tabacum |
| AAA33709.1 | L16797 | Petunia x hybrida | CAA30760.1 | X07937 | Zea mays |
| AAC24195.1 | AF020425 | Nicotiana tabacum | AAB36653.1 | U32644 | Nicotiana tabacum |
| AAB40608.1 | U54774 | Nicotiana tabacum | AAK28303.1 | AF346431 | Nicotiana tabacum |
| AAK18620.1 | AF352732 | Nicotiana tabacum | CAA31855.1 | X13500 | Zea mays |
| AAC39483.1 | AF020424 | Nicotiana tabacum | CAA30761.1 | X07940 | Zea mays |
| BAB32870.1 | AB056062 | Oryza sativa | AAK16410.1 | AF320086 | Zea mays |
| BAB32868.1 | AB056060 | Oryza sativa | | | |
| BAB32869.1 | AB056061 | Oryza sativa | | | |

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|------------|----------|-----------------------------|-----------------|----------|-------------------------------|
| CAB56231.1 | Y18871 | Dorotheanthus bellidiformis | AAB19183.1 | U41189 | Chlamydomonas reinhardtii |
| AAD26203.1 | AF117267 | Malus x domestica | SEQ ID NO. 1814 | | |
| BAA89008.1 | AB027454 | Petunia x hybrida | BAK14395.1 | AF339732 | Dianthus caryophyllus |
| BAA19659.1 | AB002818 | Perilla frutescens | BAB20581.1 | AB042268 | Zea mays |
| BAA12737.1 | D85186 | Gentiana triflora | BAB20580.1 | AB042267 | Zea mays |
| AAB86473.1 | AF028237 | Ipomoea purpurea | BAB20579.1 | AB042261 | Zea mays |
| CAA33729.1 | X15694 | Hordeum vulgare | BAA85113.1 | AB031012 | Zea mays |
| | | | BAA82873.1 | AB024291 | Zea mays |
| | | | BAB17300.1 | AB042260 | Zea mays |
| | | Populus tremula x Populus | BAA75253.1 | AB004882 | Zea mays |
| | | Populus tremula x Populus | BAA85112.1 | AB031011 | Zea mays |
| | | | BAB20582.1 | AB042269 | Zea mays |
| | | | BAB41137.1 | AB060130 | Zea mays |
| | | Gossypium hirsutum | SEQ ID NO. 1815 | | |
| AAD29050.1 | AF132855 | Flaveria linearis | AAB62808.1 | U71108 | Nicotiana tabacum |
| AAA86993.1 | U19738 | Gossypium hirsutum | AAB62807.1 | U71107 | Nicotiana tabacum |
| AAD29049.1 | AF132854 | Flaveria brownii | AAC34989.1 | AF042333 | Oryza sativa |
| AAA86942.1 | U08402 | Spinacia oleracea | AAC34951.1 | U81312 | Nicotiana tabacum |
| AAA34027.1 | J05403 | Nicotiana tabacum | AAB04057.1 | U43683 | Glycine max |
| AAA34057.1 | L19255 | Nicotiana tabacum | AAB70886.1 | U79669 | Zea mays |
| AAA34065.1 | M94135 | Flaveria pringlei | AAC34988.1 | AF042332 | Oryza sativa subsp. japonica |
| AAA86992.1 | U19737 | Flaveria bidentis | AAC04265.1 | AF045570 | Zea mays |
| AAA86939.1 | U08398 | Spinacia oleracea | AAC35787.1 | AF053766 | Nicotiana tabacum |
| AAA34026.1 | M27295 | Pisum sativum | AAB49338.1 | U60755 | Triticum aestivum |
| AAA33652.1 | M63627 | Vigna radiata | AAB37769.1 | U60754 | Triticum aestivum |
| AAD27876.2 | AF139464 | Flaveria linearis | AAB62812.1 | U81313 | Ricinus communis |
| AAA86994.1 | U19740 | Glycine max | AAF61950.1 | AF237633 | Spinacia oleracea |
| CAB43571.1 | AJ239132 | Medicago sativa | AAG59894.1 | AF328858 | Lycopersicon esculentum |
| CAA63712.1 | X93312 | Zea mays | SEQ ID NO. 1817 | | |
| AAA86944.1 | U08401 | Oryza sativa | AAB26960.1 | U63726 | Glycine max |
| BAA31953.1 | AB016283 | Oryza sativa | SEQ ID NO. 1818 | | |
| AAD56038.1 | AF182806 | Oryza sativa | AAC36699.1 | AF075581 | Mesembryanthemum crystallinum |
| AAA86943.1 | U08404 | Oryza sativa | AAC36697.1 | AF075579 | Mesembryanthemum crystallinum |
| AAA86945.1 | U08403 | Zea mays | AAD17804.1 | AF092431 | Lotus japonicus |
| AAA69027.1 | U19739 | Urochloa panicoides | CAC10358.1 | AJ277086 | Nicotiana tabacum |
| AAA69028.1 | U19741 | Urochloa panicoides | CAB90634.1 | AJ277744 | Fagus sylvatica |
| BAA95793.1 | AB009887 | Nicotiana tabacum | CAC10359.1 | AJ277087 | Nicotiana tabacum |
| AAF78507.1 | AF195204 | Pyrus pyrifolia | | | |
| AAC33484.1 | U49976 | Coccomyxa sp. PA | | | |
| AAC49888.1 | U80805 | Chlamydomonas reinhardtii | | | |
| AAC49887.1 | U80804 | Chlamydomonas reinhardtii | | | |
| AAB19184.1 | U41190 | Chlamydomonas reinhardtii | | | |

| SEQ ID NO. | Accession | Species | SEQ ID NO. | Accession | Species |
|-----------------|-----------|-------------------------------|-----------------|-----------|---------------------------|
| CAC09575.1 | AJ298987 | Fagus sylvatica | SEQ ID NO. 1825 | | |
| AAD11430.1 | AF097667 | Mesembryanthemum crystallinum | CAC17011.1 | AJ297967 | Fragaria x ananassa |
| AAD17805.1 | AF092432 | Lotus japonicus | CAA93442.1 | Z69596 | Fragaria x ananassa |
| AAC35951.1 | AF079355 | Mesembryanthemum crystallinum | CAA63919.1 | X94225 | Brassica napus |
| AAC36698.1 | AF075580 | Mesembryanthemum crystallinum | AAF19789.1 | AF162204 | Lactuca sativa |
| CAA72341.1 | Y11607 | Medicago sativa | SEQ ID NO. 1826 | | |
| AAC36700.1 | AF075582 | Mesembryanthemum crystallinum | BAA76438.1 | AB025047 | Oryza sativa |
| AAG43835.1 | AF213455 | Zea mays | CAG70475.1 | Y09291 | Triticum aestivum |
| AAB93832.1 | U81960 | Zea mays | AAC49659.1 | U74319 | Sorghum bicolor |
| CAC09576.1 | AJ298988 | Fagus sylvatica | CAG70476.1 | Y09292 | Triticum aestivum |
| AAC26828.1 | AF075603 | Oryza sativa | CAB64667.1 | AJ251798 | Triticum aestivum |
| SEQ ID NO. 1825 | | | SEQ ID NO. 1827 | | |
| CAC17011.1 | AJ297967 | Fragaria x ananassa | CAB94837.1 | AJ277950 | Nicotiana plumbaginifolia |
| CAA93442.1 | Z69596 | Fragaria x ananassa | CAG69601.2 | Y08293 | Nicotiana plumbaginifolia |
| CAA63919.1 | X94225 | Brassica napus | AAB39508.1 | U48695 | Lycopersicon esculentum |
| AAF19789.1 | AF162204 | Lactuca sativa | AAB51596.1 | U93561 | Zea mays |
| SEQ ID NO. 1826 | | | CAA09478.1 | AJ011096 | Asparagus officinalis |
| BAA76438.1 | AB025047 | Oryza sativa | BAA08445.1 | D49475 | Zea mays |
| CAG70475.1 | Y09291 | Triticum aestivum | AAB51595.1 | U93560 | Zea mays |
| AAC49659.1 | U74319 | Sorghum bicolor | CAC18730.1 | AJ303070 | Vitis vinifera |
| CAG70476.1 | Y09292 | Triticum aestivum | CAG60507.1 | X86924 | Vitis vinifera |
| CAB64667.1 | AJ251798 | Triticum aestivum | CAA69600.1 | Y08292 | Nicotiana plumbaginifolia |
| SEQ ID NO. 1827 | | | CAB94836.1 | AJ277949 | Nicotiana plumbaginifolia |
| CAB94837.1 | AJ277950 | Nicotiana plumbaginifolia | CAA09456.1 | AJ011006 | Asparagus officinalis |
| CAG69601.2 | Y08293 | Nicotiana plumbaginifolia | CAA41635.1 | X58831 | Chlorella sorokiniana |
| AAB39508.1 | U48695 | Lycopersicon esculentum | CAA41636.1 | X58832 | Chlorella sorokiniana |
| AAB51596.1 | U93561 | Zea mays | | | |
| CAA09478.1 | AJ011096 | Asparagus officinalis | | | |
| BAA08445.1 | D49475 | Zea mays | | | |
| AAB51595.1 | U93560 | Zea mays | | | |
| CAC18730.1 | AJ303070 | Vitis vinifera | | | |
| CAG60507.1 | X86924 | Vitis vinifera | | | |
| CAA69600.1 | Y08292 | Nicotiana plumbaginifolia | | | |
| CAB94836.1 | AJ277949 | Nicotiana plumbaginifolia | | | |
| CAA09456.1 | AJ011006 | Asparagus officinalis | | | |
| CAA41635.1 | X58831 | Chlorella sorokiniana | | | |
| CAA41636.1 | X58832 | Chlorella sorokiniana | | | |

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|-----------------|----------|-------------------------|-----------------|----------|-------------------------------|
| CAA68193.1 | X99937 | Spinacia oleracea | AA04191.1 | AF113950 | Lactuca sativa |
| BAA03763.1 | D16247 | Nicotiana sylvestris | AAK18295.1 | AF338960 | Brassica oleracea |
| AAF75791.1 | AF271892 | Pisum sativum | AAG43184.1 | AF107545 | Brassica napus |
| AAD20980.1 | AF079782 | Zea mays | AAG43186.1 | AF107547 | Brassica napus |
| BAA95705.1 | AB042644 | Oryza sativa | AAK20742.1 | AF325198 | Triticum aestivum |
| BAA95704.1 | AB042643 | Oryza sativa | AAG43189.1 | AF107550 | Brassica napus |
| | | | AAK18299.1 | AF338966 | Brassica rapa |
| | | | AAG40143.1 | AF209500 | Brassica napus |
| SEQ ID NO. 1840 | | Helianthus annuus | AAF19148.1 | AF158634 | Aegilops ventricosa |
| CAA70260.1 | Y09057 | Helianthus annuus | AAG52747.1 | AF263318 | Brassica napus |
| AAF00549.1 | AF189148 | | AAK18288.1 | AF338951 | Brassica oleracea |
| | | | CAC29242.1 | AJ302293 | Hordeum vulgare |
| SEQ ID NO. 1842 | | Brassica napus | CAC29241.1 | AJ302292 | Hordeum vulgare |
| AAG40131.1 | AF209484 | Brassica napus | AAG52755.1 | AF263326 | Brassica napus |
| AAG40133.1 | AF209486 | Brassica napus | AAG40134.1 | AF209487 | Brassica napus |
| AAG40132.1 | AF209485 | Brassica napus | AAK18305.1 | AF338972 | Brassica rapa |
| AAG40136.1 | AF209490 | Brassica napus | AAK20736.1 | AF325196 | Triticum aestivum |
| AAC31553.1 | AF078874 | Avena sativa | | | |
| AAC31552.1 | AF078873 | Avena sativa | | | |
| AAB96976.1 | AF032679 | Hordeum vulgare | SEQ ID NO. 1853 | | |
| AAF14565.1 | AF181728 | Brassica napus | AAC78596.1 | AF053998 | Lycopersicon esculentum |
| AAK18300.1 | AF338967 | Brassica rapa | AAC78591.1 | AF053993 | Lycopersicon esculentum |
| AAG40139.1 | AF209494 | Brassica napus | AAC78593.1 | AF053995 | Lycopersicon esculentum |
| AAB96999.1 | AF032702 | Oryza sativa | AAC78592.1 | AF053994 | Lycopersicon esculentum |
| AAG40140.1 | AF209495 | Brassica napus | AAC78594.1 | AF053996 | Lycopersicon pimpinellifolium |
| AAG40135.1 | AF209489 | Brassica napus | CAA05274.1 | AJ002236 | Lycopersicon pimpinellifolium |
| AAG40142.1 | AF209499 | Brassica napus | AAA65235.1 | U15936 | Lycopersicon pimpinellifolium |
| AAK18290.1 | AF338954 | Brassica oleracea | CAA05276.1 | AJ002236 | Lycopersicon pimpinellifolium |
| AAG43187.1 | AF107548 | Brassica napus | AAC78595.1 | AF053997 | Lycopersicon esculentum |
| AAK18301.1 | AF338968 | Brassica rapa | CAA05268.1 | AJ002235 | Lycopersicon hirsutum |
| AAD27815.1 | AF118127 | Lycopersicon esculentum | CAA05279.1 | AJ002237 | Lycopersicon esculentum |
| AAB63275.1 | AF004879 | Lycopersicon esculentum | BAB08215.1 | AP002539 | Oryza sativa |
| AAD03157.1 | AF113957 | Lactuca sativa | BAA96776.1 | AP002521 | Oryza sativa |
| AAD03156.1 | AF113948 | Lactuca sativa | AAD50430.1 | AF166121 | Hordeum vulgare |
| AAG43188.1 | AF107549 | Brassica napus | CAB55409.1 | AL117265 | Oryza sativa |
| AAD03671.1 | AF072271 | Lactuca sativa | AAC80225.1 | U72723 | Oryza longistaminata |
| AAF14567.1 | AF181730 | Brassica rapa | AAC49123.1 | U37133 | Oryza sativa |
| AAG52749.1 | AF263320 | Brassica napus | | | |
| AAC02203.1 | AF017752 | Lactuca sativa | SEQ ID NO. 1854 | | |
| AAC02202.1 | AF017751 | Lactuca sativa | AAF06346.1 | AF195653 | Vitis vinifera |
| AAF14566.1 | AF181729 | Brassica oleracea | BAA28872.1 | AB006009 | Pyrus pyrifolia |
| BAA75812.1 | AB019186 | Oryza sativa | CAC10270.1 | AJ243427 | Malus x domestica |

| SEQ ID NO. | 1859 | 1861 | 1863 |
|------------|-------------------------------|------------|---------------------------------|
| AF035944 | Fragaria x ananassa | AAG01179.1 | Zea mays |
| AB017517 | Marchantia polymorpha | BAA22410.1 | Zea mays |
| AB017515 | Marchantia polymorpha | AAC24961.1 | Tradescantia virginiana |
| AB017516 | Marchantia polymorpha | BAA09814.1 | Oryza sativa |
| AB017515 | Marchantia polymorpha | AAC32116.1 | Picea mariana |
| AB017515 | Marchantia polymorpha | AAD52092.1 | Nicotiana tabacum |
| AJ007366 | Zea mays | AAE21450.1 | Nicotiana tabacum |
| U82087 | Tortula ruralis | | |
| D84408 | Zea mays | SEQ ID NO. | |
| D87042 | Zea mays | CAB82852.1 | Mesembryanthemum crystallin |
| D85039 | Zea mays | CAA50374.1 | Nicotiana tabacum |
| U08140 | Vigna radiata | CAA82991.1 | Spinacia oleracea |
| X81394 | Oryza sativa | BAB03409.1 | Oryza sativa |
| U90262 | Cucurbita pepo | CAA82994.1 | Mesembryanthemum crystallin |
| U28376 | Zea mays | CAA62476.1 | Solanum tuberosum |
| L27484 | Zea mays | AAA50304.1 | Pisum sativum |
| AF090835 | Mesembryanthemum crystallinum | CAA82993.1 | Spinacia oleracea |
| U69173 | Glycine max | BAB18104.1 | Chlamydomonas reinhardtii |
| U69174 | Glycine max | BAB18105.1 | Chlamydomonas reinhardtii |
| L15390 | Zea mays | AAF66637.1 | Lycopersicon esculentum |
| AF072908 | Nicotiana tabacum | CAA66616.1 | Solanum berthaultii |
| AF115406 | Solanum tuberosum | BAA96593.1 | Oryza sativa |
| D87707 | Ipomoea batatas | CAA73068.1 | Sorghum bicolor |
| X56599 | Daucus carota | CAA73067.1 | Sorghum bicolor |
| X96723 | Medicago sativa | BAA83689.1 | Oryza sativa |
| AP000615 | Oryza sativa | BAA83688.1 | Oryza sativa |
| X81393 | Oryza sativa | BAA05649.1 | Nicotiana tabacum |
| AF048691 | Oryza sativa | AAF22219.1 | Zea mays |
| AY027885 | Cucumis sativus | CAA71142.1 | Cucumis sativus |
| Y18055 | Arachis hypogaea | AAD23582.1 | Glycine max |
| AC073166 | Oryza sativa | | |
| D13436 | Oryza sativa | SEQ ID NO. | |
| AF216527 | Dunaliella tertiolecta | AAB01085.2 | Triticum aestivum |
| Z49233 | Chlamydomonas eugametos | AAF32492.1 | Mitochondrion Triticum aestivum |
| AF194414 | Oryza sativa | SEQ ID NO. | |
| AF194413 | Oryza sativa | BAA77358.1 | Nicotiana tabacum |
| AF030879 | Solanum tuberosum | AAC49528.1 | Petroselinum crispum |
| X83869 | Daucus carota | AAD27591.1 | Petroselinum crispum |
| D84508 | Zea mays | AAC49529.1 | Petroselinum crispum |
| S82324 | Zea mays | CAA88326.1 | Avena fatua |
| D84507 | Zea mays | | |

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|-----------------|----------|---------------------------------|-----------------|----------|----------------------------|
| AA49527.1 | U4831 | Petroselinum crispum | AAF27282.1 | AF122821 | Capsicum annuum |
| AAD16139.1 | AF096299 | Nicotiana tabacum | BAA22422.1 | AB001379 | Glycyrrhiza echinata |
| AAD16138.1 | AF096298 | Nicotiana tabacum | AAA17732.1 | L19074 | Catharanthus roseus |
| CAA88331.1 | Z48431 | Avena fatua | CAA57423.1 | X81829 | Zea mays |
| AAC37515.1 | L44134 | Cucumis sativus | CAA72208.1 | Y11404 | Zea mays |
| AAF61864.1 | AF193771 | Nicotiana tabacum | AAF66543.1 | AF140609 | Triglochin maritimum |
| BAA87069.1 | AB035271 | Matricaria chamomilla | AAC39454.1 | AF014802 | Eschscholzia californica |
| AAF61863.1 | AF193770 | Nicotiana tabacum | CAA04117.1 | AJ000478 | Helianthus tuberosus |
| | | | CAA04116.1 | AJ000477 | Helianthus tuberosus |
| | | | AAA32913.1 | M32885 | Persea americana |
| SEQ ID NO. 1866 | | | | | |
| CAB40834.1 | AJ005686 | Vitis vinifera | SEQ ID NO. 1870 | | Brassica rapa subsp. pekin |
| AAK01360.1 | AF314811 | Brassica napus | AAF21800.1 | AF090836 | Triticum aestivum |
| AAC14481.1 | U92286 | Actinidia deliciosa | CAA50004.1 | X70666 | Triticum aestivum |
| AAB67875.1 | U50267 | Lycopersicon esculentum | CAA65313.1 | X96446 | Hordeum vulgare |
| CAA67069.1 | X98421 | Medicago sativa | AAA32978.1 | M19048 | Hordeum vulgare |
| AAK01361.1 | AF314812 | Brassica napus | AAA32977.1 | M19047 | Hordeum vulgare |
| BAA19916.1 | D49714 | Oryza sativa | AAA32976.1 | M19046 | Hordeum vulgare |
| AAC18862.1 | AF067967 | Mesembryanthemum crystallinum | AAB71137.1 | AF004018 | Triticum aestivum |
| CAA67070.1 | X98422 | Medicago sativa | BAA12336.1 | D84390 | Triticum aestivum |
| AAC84137.1 | AF101424 | Cichorium intybus | CAA65315.1 | X96448 | Triticum aestivum |
| AAB80946.1 | AF022914 | Triticum aestivum | CAA50003.1 | X70665 | Triticum aestivum |
| | | | CAA65316.1 | X96449 | Secale cereale |
| SEQ ID NO. 1867 | | | | | |
| AAD56018.1 | AF180758 | Vitis riparia | CAA65312.1 | X96445 | Triticum aestivum |
| AAF34765.1 | AF227620 | Euphorbia esula | AA91048.1 | L36883 | Hordeum vulgare |
| | | | CAA29330.1 | X05901 | Hordeum vulgare |
| | | | AAA32966.1 | M23080 | Hordeum vulgare |
| SEQ ID NO. 1868 | | | | | |
| AAG17470.1 | AF123609 | Triticum aestivum | CAA57351.1 | X81707 | Tulipa gesneriana |
| AAK31592.1 | AY029178 | Brassica rapa subsp. pekinensis | CAA78352.1 | Z13008 | Hordeum vulgare |
| AAD10204.1 | AF030260 | Vicia sativa | AA91047.1 | L36882 | Hordeum vulgare |
| ARG33645.1 | AF092917 | Vicia sativa | CAA29082.1 | X05576 | Hordeum vulgare |
| CAB41474.1 | AJ238402 | Catharanthus roseus | CAA57353.1 | X81709 | Tulipa gesneriana |
| AAB94586.1 | AF022457 | Glycine max | CAA57352.1 | X81708 | Tulipa gesneriana |
| AAD56282.1 | AF155332 | Petunia x hybrida | CAA57350.1 | X81706 | Tulipa gesneriana |
| AAD03415.1 | AF069494 | Sinapis alba | CAA57354.1 | X81710 | Tulipa gesneriana |
| CAA89260.1 | Z49263 | Pisum sativum | CAA65314.1 | X96447 | Triticum aestivum |
| AAC32274.1 | AF081575 | Petunia x hybrida | | | |
| CAA50155.1 | X70824 | Solanum melongena | SEQ ID NO. 1872 | | Petunia x hybrida |
| AAF66544.1 | AF140610 | Triglochin maritimum | AAD39439.1 | AF132001 | Picea abies |
| AAB94590.1 | AF022461 | Glycine max | AAG32658.1 | AF253970 | Picea abies |
| BAA74465.1 | AB022732 | Glycyrrhiza echinata | AAG32659.1 | AF253971 | Picea abies |

[illegible]

| SEQ ID NO. | 1879 | 1880 | 1881 | 1882 | 1889 | 1890 |
|------------|--------------------------|------|------|------|------|------|
| BAA12206.1 | D84061 | | | | | |
| | Spinacia oleracea | | | | | |
| SEQ ID NO. | 1879 | 1880 | 1881 | 1882 | | |
| CAC21424.1 | AJ278332 | | | | | |
| BAB40340.1 | AB044940 | | | | | |
| CAB43506.1 | AJ242551 | | | | | |
| | Lycopersicon esculentum | | | | | |
| | Pisum sativum | | | | | |
| | Lycopersicon esculentum | | | | | |
| | Phaseolus vulgaris | | | | | |
| | Phaseolus vulgaris | | | | | |
| | Zea mays | | | | | |
| | Petunia x hybrida | | | | | |
| | Petunia x hybrida | | | | | |
| | Petunia x hybrida | | | | | |
| | Oryza sativa | | | | | |
| | Nicotiana tabacum | | | | | |
| | Citrus sinensis | | | | | |
| | Solanum tuberosum | | | | | |
| | Stylosanthes hamata | | | | | |
| | Oryza sativa | | | | | |
| | Nicotiana sylvestris | | | | | |
| | Nicotiana sylvestris | | | | | |
| | Nicotiana tabacum | | | | | |
| | Lycopersicon esculentum | | | | | |
| | Nicotiana sylvestris | | | | | |
| | Matricaria chamomilla | | | | | |
| | Lycopersicon esculentum | | | | | |
| | Catharanthus roseus | | | | | |
| | Catharanthus roseus | | | | | |
| | Lycopersicon esculentum | | | | | |
| | Nicotiana tabacum | | | | | |
| | Nicotiana tabacum | | | | | |
| | Brassica napus | | | | | |
| | Oryza sativa | | | | | |
| SEQ ID NO. | 1883 | | | | | |
| BAA92965.1 | AP001551 | | | | | |
| | Brassica napus | | | | | |
| | Lotus japonicus | | | | | |
| | Lycopersicon esculentum | | | | | |
| | Lycopersicon esculentum | | | | | |
| | Nepenthes alata | | | | | |
| | Brassica napus | | | | | |
| | Pisum sativum | | | | | |
| | Dolichos biflorus | | | | | |
| | Glycine soja | | | | | |
| | Glycine soja | | | | | |
| | Dolichos biflorus | | | | | |
| | Lotus japonicus | | | | | |
| | Pisum sativum | | | | | |
| | Pisum sativum | | | | | |
| | Pisum sativum | | | | | |
| | Pisum sativum | | | | | |
| | Pisum sativum | | | | | |
| | Pisum sativum | | | | | |
| | Medicago sativa | | | | | |
| | Pisum sativum | | | | | |
| | Pisum sativum | | | | | |
| | Solanum tuberosum | | | | | |
| | Pisum sativum | | | | | |
| | Pisum sativum | | | | | |
| | Eucalyptus camaldulensis | | | | | |
| | Eucalyptus camaldulensis | | | | | |
| | Oryza sativa | | | | | |
| | Triticum aestivum | | | | | |
| | Oryza sativa | | | | | |
| | Solanum tuberosum | | | | | |
| | Oryza sativa | | | | | |
| | Oryza sativa | | | | | |
| | Oryza sativa | | | | | |

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|-----------------|----------|-------------------------------|-----------------|----------|---------------------------|
| CAA944437.1 | Z70524 | Spirodela polyrrhiza | CAA12231.1 | AJ224932 | Lycopersicon esculentum |
| BAA94511.1 | AB041505 | Populus nigra | CAA12233.1 | AJ224934 | Lycopersicon esculentum |
| SEQ ID NO. 1894 | | | AAB94923.1 | AF038386 | Capsicum annuum |
| AAG13131.1 | AF193791 | Fragaria x ananassa | CAA72091.1 | Y11208 | Nicotiana tabacum |
| BAB08208.1 | AP002539 | Oryza sativa | CAB88668.1 | AJ400863 | Cicer arietinum |
| BAA96769.1 | AP002521 | Oryza sativa | CAA42530.1 | X59873 | Triticum aestivum |
| AAB40530.1 | U38199 | Oryza sativa | AAB04688.1 | U08226 | Zea mays |
| AAA90948.1 | U27350 | Oryza sativa | CAA12230.1 | AJ224931 | Lycopersicon esculentum |
| CAA57447.1 | X81854 | Oryza sativa | CAA40564.1 | X57312 | Zea mays |
| CAA91445.1 | Z66544 | Nicotiana tabacum | CAA49584.1 | X69960 | Zea mays |
| AAA68290.1 | U07339 | Pisum sativum | CAA57778.1 | X82362 | Asparagus officinalis |
| AAC49442.1 | U26660 | Oryza sativa | CAA40565.1 | X57313 | Zea mays |
| CAA35589.1 | X17555 | Oryza sativa | CAA49585.1 | X69961 | Zea mays |
| CAA42120.1 | X59546 | Zea mays | BAA07156.1 | D37942 | Triticum aestivum |
| AAA68289.1 | U07338 | Zea mays | BAA07157.1 | D37943 | Triticum aestivum |
| CAA57448.1 | X81855 | Oryza sativa | BAA07159.1 | D37945 | Triticum aestivum |
| AAG22488.1 | AF195868 | Nicotiana tabacum | AAA98454.1 | U16726 | Chlamydomonas reinhardtii |
| CAA91444.1 | Z66543 | Vitis vinifera | AAA98450.1 | U16725 | Chlamydomonas reinhardtii |
| CAB61763.1 | AJ251245 | Pisum sativum | AAA98446.1 | U16724 | Chlamydomonas reinhardtii |
| CAA63404.1 | X92743 | Saccharum officinarum | AAA34248.1 | M31921 | Volvox carteri |
| BAA03354.1 | D14457 | Oryza sativa | AAA34250.1 | M31922 | Volvox carteri |
| CAA79819.1 | Z21722 | Zea mays | AAC05126.1 | AF048824 | Malus x domestica |
| BAA03353.1 | D14456 | Zea mays | CAA64986.1 | X95690 | Allium cepa |
| CAA79818.1 | Z21721 | Zea mays | BAA07158.1 | D37944 | Triticum aestivum |
| SEQ ID NO. 1895 | | | CAA64987.1 | X95691 | Allium cepa |
| CAA80559.1 | Z23023 | Solanum tuberosum | BAA96095.1 | AB003780 | Lilium longiflorum |
| CAA12157.1 | AJ224847 | Zea mays | SEQ ID NO. 1909 | | |
| CAA54986.1 | X78069 | Flaveria pringlei | CAC26921.1 | AJ295607 | Arabidopsis lyrata subsp. |
| CAA45772.1 | X64434 | Mesembryanthemum crystallinum | petraea | | |
| AAB08874.1 | U67426 | Vitis vinifera | BAA36553.1 | AB011795 | Citrus sinensis |
| AAA67087.1 | L34836 | Vitis vinifera | AAD56577.1 | AF184270 | Daucus carota |
| CAB66003.1 | AJ132257 | Apium graveolens | AAC49929.1 | AF022142 | Petunia x hybrida |
| AAA34174.1 | L27509 | Lycopersicon esculentum | BAA75309.1 | AB023790 | Ipomoea batatas |
| AAD11429.1 | AF097666 | Mesembryanthemum crystallinum | BAA75308.1 | AB023789 | Ipomoea batatas |
| AAA83963.1 | L35306 | Lycopersicon esculentum | AAD26206.1 | AF117270 | Malus x domestica |
| BAA76435.1 | AB025007 | Cicer arietinum | AAB41102.1 | U74081 | Ipomoea purpurea |
| SEQ ID NO. 1896 | | | CAA53579.1 | X75965 | Vitis vinifera |
| AAB97163.1 | AF025667 | Gossypium hirsutum | BAA21897.1 | D83041 | Ipomoea nil |
| | | | CAA57410.1 | X81812 | Medicago sativa |
| | | | CAA55628.1 | X78994 | Medicago sativa |

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|-----------------|----------|-------------------------|-----------------|----------|---------------------|
| AA67050.1 | AF190301 | Secale cereale | AAK28804.1 | AF310959 | Linum usitatissimum |
| AA67051.1 | AF190302 | Secale cereale | AA09951.1 | AF175388 | Glycine max |
| CAA78388.1 | Z13998 | Petunia x hybrida | CAC35337.1 | AJ310162 | Linum usitatissimum |
| CAA72218.1 | Y11415 | Oryza sativa | CAC35330.1 | AJ310155 | Linum usitatissimum |
| BAA81731.1 | AB029160 | Glycine max | CAA08797.1 | AJ009719 | Solanum tuberosum |
| BAA81730.1 | AB029159 | Glycine max | CAC35326.1 | AJ310151 | Linum usitatissimum |
| CAA72217.1 | Y11414 | Oryza sativa | CAC35325.1 | AJ310150 | Linum usitatissimum |
| BAA81736.1 | AB029165 | Glycine max | CAC35336.1 | AJ310161 | Linum usitatissimum |
| AAB41101.1 | U72762 | Nicotiana tabacum | CAC353328.1 | AJ310153 | Linum usitatissimum |
| BAA8223.1 | AB028651 | Nicotiana tabacum | CAC35332.1 | AJ310157 | Linum usitatissimum |
| BAR23340.1 | D88620 | Oryza sativa | CAC35339.1 | AJ310164 | Linum usitatissimum |
| BAA81733.2 | AB029162 | Glycine max | AA025966.1 | AF093639 | Linum usitatissimum |
| BAA88222.1 | AB028650 | Nicotiana tabacum | CAC35338.1 | AJ310163 | Linum usitatissimum |
| CAB43399.1 | AJ006292 | Antirrhinum majus | AA043546.1 | AF211528 | Nicotiana tabacum |
| BAA81732.1 | AB029161 | Glycine max | CAC35321.1 | AJ310150 | Linum usitatissimum |
| AAG28525.1 | AF198498 | Nicotiana tabacum | CAC35333.1 | AJ310158 | Linum usitatissimum |
| CAA50226.1 | X70881 | Hordeum vulgare | CAC35334.1 | AJ310159 | Linum usitatissimum |
| CAA50223.1 | X70878 | Hordeum vulgare | CAC35329.1 | AJ310154 | Linum usitatissimum |
| CAA78387.1 | Z13997 | Petunia x hybrida | AA025969.1 | AF093642 | Linum usitatissimum |
| CAA67000.1 | X98355 | Oryza sativa | AA025974.1 | AF093647 | Linum usitatissimum |
| AAK19616.1 | AF336283 | Gossypium hirsutum | CAC35327.1 | AJ310152 | Linum usitatissimum |
| AAG28526.1 | AF198499 | Nicotiana tabacum | AA025975.1 | AF093648 | Linum usitatissimum |
| CAA78386.1 | Z13996 | Petunia x hybrida | AA001052.1 | AF175395 | Glycine max |
| CAA66952.1 | X98308 | Lycopersicon esculentum | CAC35331.1 | AJ310156 | Linum usitatissimum |
| BAA23341.1 | D88621 | Oryza sativa | CAC35323.1 | AJ310150 | Linum usitatissimum |
| CAA50221.1 | X70876 | Hordeum vulgare | AA025968.1 | AF093641 | Linum usitatissimum |
| AAK19611.1 | AF336278 | Gossypium hirsutum | AA01022.1 | U27081 | Linum usitatissimum |
| CAA61021.1 | X87690 | Hordeum vulgare | AA025976.1 | AF093649 | Linum usitatissimum |
| AA022863.1 | AY008692 | Hordeum vulgare | AA01021.1 | U27081 | Linum usitatissimum |
| | | | AA025970.1 | AF093643 | Linum usitatissimum |
| | | | AA025967.1 | AF093640 | Linum usitatissimum |
| | | | AA047618.1 | U73916 | Linum usitatissimum |
| | | | AA025971.1 | AF093644 | Linum usitatissimum |
| | | | AA025965.1 | AF093638 | Linum usitatissimum |
| | | | AA025973.1 | AF093646 | Linum usitatissimum |
| | | | AA025972.1 | AF093645 | Linum usitatissimum |
| | | | AA001051.1 | AF175394 | Glycine max |
| | | | AA009954.1 | AF175399 | Glycine max |
| | | | AA009953.1 | AF175398 | Glycine max |
| SEQ ID NO. 1915 | | | | | |
| AA050763.1 | U15605 | Nicotiana glutinosa | | | |
| AAK28809.1 | AF310962 | Linum usitatissimum | | | |
| AAK28810.1 | AF310964 | Linum usitatissimum | | | |
| AAK28812.1 | AF310968 | Linum usitatissimum | | | |
| AAK28808.1 | AF310961 | Linum usitatissimum | | | |
| AAK28805.1 | AF310960 | Linum usitatissimum | | | |
| CAA08798.1 | AJ009720 | Solanum tuberosum | | | |
| AAK28811.1 | AF310966 | Linum usitatissimum | | | |
| AAK28806.1 | AF310960 | Linum usitatissimum | | | |
| AAK28803.1 | AF310958 | Linum usitatissimum | | | |
| | | | SEQ ID NO. 1918 | | |

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|-----------------|----------|-------------------------|-----------------|----------|------------------------------|
| AAF76897.1 | AF274032 | Atriplex hortensis | AAD25969.1 | AF093642 | Linum usitatissimum |
| AAD25162.1 | AF014810 | Lycopersicon esculentum | CAC35337.1 | AJ310162 | Linum usitatissimum |
| AAD25161.1 | AF014809 | Lycopersicon esculentum | CAC35331.1 | AJ310156 | Linum usitatissimum |
| AAD25160.1 | AF014808 | Lycopersicon esculentum | CAC35334.1 | AJ310159 | Linum usitatissimum |
| CAA70778.1 | Y09591 | Vicia faba | CAC35323.1 | AJ310150 | Linum usitatissimum |
| AAB96830.1 | U64823 | Nicotiana sylvestris | CAC35327.1 | AJ310152 | Linum usitatissimum |
| AAB48944.1 | U31932 | Nicotiana sylvestris | AAD25968.1 | AF093641 | Linum usitatissimum |
| AAD16015.1 | AF080544 | Nepenthes alata | AAA91022.1 | U27081 | Linum usitatissimum |
| CAA70969.1 | Y09826 | Solanum tuberosum | AAA91021.1 | U27081 | Linum usitatissimum |
| CAA70968.1 | Y09825 | Solanum tuberosum | CAC35338.1 | AJ310163 | Linum usitatissimum |
| AAD16014.1 | AF080543 | Nepenthes alata | CAC35332.1 | AJ310157 | Linum usitatissimum |
| AAD16013.1 | AF080542 | Nepenthes alata | CAC35325.1 | AJ310150 | Linum usitatissimum |
| AAF15945.1 | AF061435 | Vicia faba | CAC35336.1 | AJ310161 | Linum usitatissimum |
| AAF15946.1 | AF061436 | Vicia faba | CAC35333.1 | AJ310158 | Linum usitatissimum |
| AAF15944.1 | AF061434 | Vicia faba | CAC35321.1 | AJ310150 | Linum usitatissimum |
| | | | AAG09954.1 | AF175399 | Glycine max |
| | | | CAC35330.1 | AJ310155 | Linum usitatissimum |
| | | | CAC35328.1 | AJ310153 | Linum usitatissimum |
| | | | CAC35339.1 | AJ310164 | Linum usitatissimum |
| | | | CAC35326.1 | AJ310151 | Linum usitatissimum |
| | | | AAK28810.1 | AF310964 | Linum usitatissimum |
| | | | AAK28812.1 | AF310968 | Linum usitatissimum |
| | | | AAK28811.1 | AF310966 | Linum usitatissimum |
| | | | | | |
| SEQ ID NO. 1919 | | | SEQ ID NO. 1920 | | |
| CAA08798.1 | AJ009720 | Solanum tuberosum | CAC35328.1 | X55751 | Solanum tuberosum |
| AAA50763.1 | U15605 | Nicotiana glutinosa | AAC31886.1 | AF059484 | Gossypium hirsutum |
| AAG43546.1 | AF211528 | Nicotiana tabacum | CAA45149.1 | X63603 | Nicotiana tabacum |
| CAA08797.1 | AJ009719 | Solanum tuberosum | CAA39278.1 | X55749 | Solanum tuberosum |
| AAB47618.1 | U73916 | Linum usitatissimum | AAC49651.1 | U68461 | Striga asiatica |
| AAK28803.1 | AF310958 | Linum usitatissimum | AAC49652.1 | U68462 | Striga asiatica |
| AAK28804.1 | AF310959 | Linum usitatissimum | AAF40438.1 | AF234528 | Avena nuda |
| AAK28808.1 | AF310961 | Linum usitatissimum | AAF03692.1 | AF172094 | Picea rubens |
| AAK28809.1 | AF310962 | Linum usitatissimum | AAF31643.1 | AF143208 | Vigna radiata |
| AAK28805.1 | AF310960 | Linum usitatissimum | CAA33874.1 | X15865 | Oryza sativa |
| AAG01052.1 | AF175395 | Glycine max | AAG10041.1 | AF288226 | Setaria italica |
| AAG09951.1 | AF175388 | Glycine max | BAA89214.1 | AB032361 | Mimosa pudica |
| AAG01051.1 | AF175394 | Glycine max | CAA39281.1 | X55752 | Solanum tuberosum |
| CAC35329.1 | AJ310154 | Linum usitatissimum | AAF71264.1 | AF246714 | Phalaenopsis sp. 'True Lady' |
| AAD25972.1 | AF093645 | Linum usitatissimum | AAD41039.1 | AF112538 | Malva pusilla |
| AAD25976.1 | AF093649 | Linum usitatissimum | AAF71265.1 | AF246715 | Phalaenopsis sp. 'True Lady' |
| AAD25967.1 | AF093640 | Linum usitatissimum | | | |
| AAD25966.1 | AF093639 | Linum usitatissimum | | | |
| AAD25965.1 | AF093638 | Linum usitatissimum | | | |
| AAD25975.1 | AF093648 | Linum usitatissimum | | | |
| AAD25974.1 | AF093647 | Linum usitatissimum | | | |
| AAD25973.1 | AF093646 | Linum usitatissimum | | | |
| AAD25971.1 | AF093644 | Linum usitatissimum | | | |
| AAD25970.1 | AF093643 | Linum usitatissimum | | | |

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|-----------------|-------------------------------|-----------------|----------|-------------------------------|
| AAD03741.1 | Brassica napus | CAC10358.1 | AJ277086 | Nicotiana tabacum |
| CAA55923.1 | Sorghum bicolor | AAC36698.1 | AF075580 | Mesembryanthemum crystallin |
| AAB38512.1 | Pisum sativum | CAC10359.1 | AJ277087 | Nicotiana tabacum |
| AAB38511.1 | Pisum sativum | AAG43835.1 | AF213455 | Zea mays |
| AAB18642.1 | Pisum sativum | CAC09575.1 | AJ298987 | Fagus sylvatica |
| AAB18641.1 | Pisum sativum | CAB90634.1 | AJ277744 | Fagus sylvatica |
| CAA62028.1 | Pisum sativum | AAC35951.1 | AF079355 | Mesembryanthemum crystallin |
| CAA34356.1 | Oryza sativa | AAD11430.1 | AF097667 | Mesembryanthemum crystallin |
| CAA47899.1 | Pisum sativum | AAC36700.1 | AF075582 | Mesembryanthemum crystallin |
| AAF82805.1 | Helianthus annuus | CAC09576.1 | AJ298988 | Fagus sylvatica |
| CAA48609.1 | Pisum sativum | AAC26828.1 | AF075603 | Oryza sativa |
| AAC16054.1 | Coleochaete scutata | AAB93832.1 | U81960 | Zea mays |
| AAB38514.1 | Pisum sativum | AAC36699.1 | AF075581 | Mesembryanthemum crystallin |
| AAB18644.1 | Pisum sativum | SEQ ID NO. 1927 | | |
| AAC64127.1 | Anemia phyllitidis | AAG02411.1 | AF284038 | Cucurbita maxima |
| CAA39279.1 | Solanum tuberosum | CAA72274.1 | Y11486 | Triticum aestivum |
| AAD02328.1 | Brassica oleracea | CAB52709.1 | AJ245878 | Triticum aestivum |
| CAA23728.1 | Glycine max | CAB52710.1 | AJ245879 | Triticum aestivum |
| AAC16055.1 | Mesostigma viride | CAA66232.1 | X97636 | Hordeum vulgare |
| AF091810 | Anemia phyllitidis | CAA72273.1 | Y11485 | Triticum aestivum |
| AF049106 | Glycine max | CAA64599.1 | X95277 | Hordeum vulgare |
| AF281323 | Magnolia denudata | CAA90071.1 | Z49890 | Triticum aestivum |
| D50839 | Chlamydomonas reinhardtii | BAA88536.1 | AP000969 | Oryza sativa |
| D50838 | Chlamydomonas reinhardtii | SEQ ID NO. 1928 | | |
| M33963 | Volvox carteri | AAC35846.1 | AF083333 | Medicago sativa |
| AAA33423.1 | Zea mays | AAA74882.1 | L36823 | Stylosanthes humilis |
| AAA33433.1 | Scherffelia dubia | AAK28509.1 | AF320110 | Fragaria x ananassa |
| AAC16053.1 | Oryza sativa | AAD10327.1 | U63534 | Fragaria x ananassa |
| CAA33873.1 | Oryza sativa | AAB38503.1 | U79770 | Mesembryanthemum crystallinum |
| CAA33871.1 | Glycine max | AAC15467.1 | U24561 | Apium graveolens |
| AAA33940.1 | Anemia phyllitidis | AAC61854.1 | AF067082 | Apium graveolens |
| AAC64126.1 | Selaginella apoda | AAA74883.1 | L36456 | Stylosanthes humilis |
| AAD48335.1 | Cosmarium botrytis | CAA86072.1 | Z37991 | Pinus taeda |
| AAD48336.1 | Solanum tuberosum | CAA51226.1 | X72675 | Picea abies |
| CAA39276.1 | Medicago sativa | CAA05097.1 | AJ001926 | Picea abies |
| SEQ ID NO. 1925 | Lotus japonicus | CAA05096.1 | AJ001925 | Picea abies |
| CAA72341.1 | Lotus japonicus | AAB38774.1 | U62394 | Pinus radiata |
| AAD17804.1 | Fagus sylvatica | CAA05095.1 | AJ001924 | Picea abies |
| AAD17805.1 | Mesembryanthemum crystallinum | CAA86073.1 | Z37992 | Pinus taeda |
| AF092432 | | | | |
| AF092431 | | | | |
| AF092432 | | | | |
| AJ277743 | | | | |
| CAB90633.1 | | | | |
| AJ277743 | | | | |
| AF075579 | | | | |

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| AAC31166.1 | AF060491 | Pinus radiata | BAA82394.1 | AP000367 | Oryza sativa |
| CAC07423.1 | AJ295837 | Populus balsamifera subsp. trichocarpa | BAA94510.1 | AB041504 | Populus nigra |
| AAF43140.1 | AF217957 | Populus tremuloides | BAA78764.1 | AB023482 | Oryza sativa |
| CAA79622.1 | Z19568 | Populus deltoides | AAF43496.1 | AF131222 | Lophopyrum elongatum |
| CRA44216.1 | X62343 | Nicotiana tabacum | AAK11674.1 | AF339747 | Lophopyrum elongatum |
| BAA03099.1 | D13991 | Aralia cordata | AAG03090.1 | AC073405 | Oryza sativa |
| AAG15553.1 | AF294793 | Eucalyptus saligna | AAB09771.1 | U67422 | Zea mays |
| AAC07987.1 | AF038561 | Eucalyptus globulus | AAF91323.1 | AF244889 | Glycine max |
| CAA44217.1 | X62344 | Nicotiana tabacum | AAF91324.1 | AF244890 | Glycine max |
| CAA46585.1 | X65631 | Eucalyptus gunnii | AAF91322.1 | AF244888 | Glycine max |
| AAF72100.1 | AF146691 | Lycopersicon esculentum | AAG25966.1 | AF302082 | Nicotiana tabacum |
| CAA53211.1 | X75480 | Eucalyptus gunnii | AAB61708.1 | U93048 | Daucus carota |
| CAA74070.1 | Y13733 | Zea mays | CAC20842.1 | AJ250467 | Pinus sylvestris |
| CAA79625.1 | Z19573 | Medicago sativa | AAF66615.1 | AF142596 | Nicotiana tabacum |
| CAA06687.1 | AJ005702 | Zea mays | AAF59906.1 | AF197947 | Glycine max |
| AAC35845.1 | AF083332 | Medicago sativa | CAB51834.1 | 00069 | Oryza sativa |
| CAA13177.1 | AJ231135 | Saccharum officinarum | CAA97692.1 | Z73295 | Catharanthus roseus |
| AAB70908.1 | AF010290 | Iolium perenne | AAC36318.1 | AF053127 | Malus x domestica |
| BAA19487.1 | D86590 | Zinnia elegans | BAA94529.2 | AP001800 | Oryza sativa |
| BAA04046.1 | D16624 | Eucalyptus botryoides | BAA94516.1 | AP001800 | Oryza sativa |
| AAF23416.1 | AF207559 | Brassica rapa | SEQ ID NO. 1936 | | |
| AAF23415.1 | AF207558 | Brassica oleracea | BAA78764.1 | AB023482 | Oryza sativa |
| AAF23414.1 | AF207557 | Brassica napus | AAF43496.1 | AF131222 | Lophopyrum elongatum |
| AAF23413.1 | AF207556 | Brassica napus | AAK11674.1 | AF339747 | Lophopyrum elongatum |
| AAD18000.1 | AF109157 | Eucalyptus globulus | AAG16628.1 | AY007545 | Brassica napus |
| AAF23409.1 | AF207552 | Brassica napus | BAA94509.1 | AB041503 | Populus nigra |
| AAF23411.1 | AF207554 | Brassica oleracea | BAA94510.1 | AB041504 | Populus nigra |
| SEQ ID NO. 1929 | | | AAK21965.1 | AY028699 | Brassica napus |
| CAA63223.1 | X92491 | Solanum tuberosum | AAF91337.1 | AF249318 | Glycine max |
| SEQ ID NO. 1935 | | | AAG03090.1 | AC073405 | Oryza sativa |
| AAC27894.1 | AF023164 | Zea mays | AAC61805.1 | U28007 | Lycopersicon esculentum |
| AAC27895.1 | AF023165 | Zea mays | AAF91336.1 | AF249317 | Glycine max |
| AAG16628.1 | AY007545 | Brassica napus | CAB51834.1 | 00069 | Oryza sativa |
| AAK21965.1 | AY028699 | Brassica napus | AAC27894.1 | AF023164 | Zea mays |
| AAF91336.1 | AF249317 | Glycine max | AAG25966.1 | AF302082 | Nicotiana tabacum |
| BAA94509.1 | AB041503 | Populus nigra | AAC33377.1 | AF290411 | Oryza meyeriana |
| AAC61805.1 | U28007 | Lycopersicon esculentum | AAC27895.1 | AF023165 | Zea mays |
| AAF91337.1 | AF249318 | Glycine max | AAB47421.1 | U59316 | Lycopersicon esculentum |
| | | | AAK11566.1 | AF318490 | Lycopersicon hirsutum |
| | | | AAF76313.1 | AF220603 | Lycopersicon esculentum |

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| AAF66615.1 | AF142596 | Nicotiana tabacum | CAB43994.1 | AJ242712 | Brassica napus |
| AAC48914.1 | U02271 | Lycopersicon pimpinellifolium | CAC45383.1 | X78800 | Eucalyptus gunnii |
| AAF76306.1 | AF220602 | Lycopersicon pimpinellifolium | AAC41647.1 | I31900 | Cucumis sativus |
| AAB47423.1 | U59315 | Lycopersicon pimpinellifolium | CAB43995.1 | AJ242713 | Brassica napus |
| AAB09771.1 | U67422 | Zea mays | BAA12870.1 | D85763 | Oryza sativa |
| CAA97692.1 | 273295 | Catharanthus roseus | AAC24855.1 | AF068686 | Glycine max |
| AAB47424.1 | U59317 | Lycopersicon pimpinellifolium | AAC28106.1 | AF079850 | Pisum sativum |
| AAB61708.1 | U93048 | Daucus carota | AAB99754.1 | AF020270 | Medicago sativa |
| AAF76307.1 | AF220602 | Lycopersicon pimpinellifolium | CAB45387.1 | AJ006974 | Plastid Nicotiana tabacum |
| AAG00510.1 | AF285172 | Phaseolus vulgaris | CAA63268.1 | X92512 | Brassica napus |
| AAK11567.1 | AF318491 | Lycopersicon hirsutum | AAA84971.1 | U40212 | Chlamydomonas reinhardtii |
| SEQ ID NO. 1937 | | | AAF69802.1 | AF195869 | Vitis vinifera |
| BAB32443.1 | AB055630 | Phragmites australis | CAC15546.1 | AJ250842 | Dunaliella bioculata |
| BAB32444.1 | AB055631 | Phragmites australis | CAA61621.1 | X89451 | Brassica napus |
| BAB32442.1 | AB055629 | Phragmites australis | AAB99755.1 | AF020271 | Medicago sativa |
| BAB32445.1 | AB055632 | Phragmites australis | AAD56659.1 | AF180335 | Glycine max |
| AAF36491.1 | AF129479 | Hordeum vulgare | AAC19244.1 | AF068687 | Glycine max |
| AAF36497.1 | AF129485 | Oryza sativa | SEQ ID NO. 1941 | | |
| AAF36492.1 | AF129480 | Hordeum vulgare | AAB95118.1 | U71244 | Brassica rapa |
| AAF36496.1 | AF129484 | Hordeum vulgare | AAF06346.1 | AF195653 | Vitis vinifera |
| CAC15061.1 | AJ300161 | Hordeum vulgare | CAC10270.1 | AJ243427 | Malus x domestica |
| SEQ ID NO. 1938 | | | AAC36740.1 | AF090143 | Malus x domestica |
| CAA71611.1 | Y10602 | Lycopersicon esculentum | BAA74546.2 | AB000834 | Nicotiana tabacum |
| CAA70100.1 | Y08887 | Lycopersicon esculentum | AAB38064.1 | U32440 | Prunus avium |
| CAA70101.1 | Y08888 | Lycopersicon esculentum | BAA28872.1 | AB006009 | Pyrus pyrifolia |
| AAC21564.1 | AF067859 | Solanum tuberosum | AAF06347.1 | AF195654 | Vitis vinifera |
| AAA62697.1 | M55684 | Hordeum vulgare | CAB62167.1 | AJ242828 | Castanea sativa |
| AAA62696.1 | M55685 | Hordeum vulgare | CAC09477.1 | AL442113 | Oryza sativa |
| BAA02971.1 | D13817 | Hordeum vulgare | BAA95017.1 | AB031870 | Cestrum elegans |
| CAA77808.1 | Z11754 | Oryza sativa | CAA10492.1 | AJ131731 | Pseudotsuga menziesii |
| BAA90618.1 | AP001129 | Zea mays | BAA95165.1 | AB029918 | Nicotiana tabacum |
| CAA71612.1 | Y10603 | Oryza sativa | AAB02259.1 | U57787 | Avena sativa |
| AAC21565.1 | AF067860 | Lycopersicon esculentum | AAB53368.1 | U77657 | Oryza sativa |
| BAA04088.1 | D16685 | Solanum tuberosum | AAF82264.1 | AF227324 | Vitis vinifera |
| AAB38970.1 | U80676 | Oryza sativa | CAA09228.1 | AJ010501 | Cicer arietinum |
| AAB39506.1 | U40465 | Botryococcus braunii | AAB61590.1 | AF003007 | Vitis vinifera |
| AAD10324.1 | U42979 | Chlamydomonas reinhardtii | CAA33293.1 | X15224 | Nicotiana tabacum |
| AAA33041.1 | M33148 | Chlamydomonas reinhardtii | AAD55090.1 | AF178653 | Vitis riparia |
| AAB99757.1 | AF020273 | Citrullus lanatus | CAA33292.1 | X15223 | Nicotiana tabacum |
| | | Medicago sativa | AAA93095.1 | J01209 | Thaumatococcus daniellii |

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| AAA81348.1 | U38965 | Vicia faba | CAA46234.1 | X65118 | Nicotiana plumbaginifolia |
| AAK32119.1 | AF308817 | Hordeum vulgare | AAA33486.1 | M74566 | Zea mays |
| AAK32118.1 | AF308816 | Hordeum vulgare | AAA79045.1 | U34742 | Spinacia oleracea |
| AAA20600.1 | U08984 | Zea mays | CAA57551.1 | X82030 | Phaseolus vulgaris |
| SEQ ID NO. 1959 | | | CAA11893.1 | AJ224324 | Hordeum vulgare |
| CAB43505.1 | AJ239051 | Cicer arietinum | CAA41023.1 | X57955 | Spinacia oleracea |
| BAA74465.1 | AB022732 | Glycyrrhiza echinata | AAA33039.1 | L15080 | Mesembryanthemum crystalli |
| BAA93634.1 | AB025016 | Lotus japonicus | CAC01238.1 | AJ292768 | Nicotiana plumbaginifolia |
| BAA22422.1 | AB001379 | Glycyrrhiza echinata | AAC49850.1 | U90212 | Nicotiana tabacum |
| CAA04117.1 | AJ000478 | Helianthus tuberosus | CAC01237.1 | AJ292767 | Nicotiana plumbaginifolia |
| CAB41490.1 | AJ238439 | Cicer arietinum | CAA81127.1 | Z26042 | Anemia phyllitidis |
| CAA04116.1 | AJ000477 | Helianthus tuberosus | AAF66823.1 | AF190655 | Nicotiana tabacum |
| CAA10067.1 | AJ012581 | Cicer arietinum | AB38974.1 | U81318 | Triticum aestivum |
| AAD56282.1 | AF155332 | Petunia x hybrida | CAA05729.1 | AJ002894 | Oryza sativa |
| AAG09208.1 | AF175278 | Pisum sativum | BAA05170.1 | D26182 | Nicotiana sylvestris |
| BAA12159.1 | D83968 | Glycine max | AAF66825.1 | AF190657 | Nicotiana tabacum |
| CAA65580.1 | X96784 | Nicotiana tabacum | AAK30205.1 | AF349964 | Daucus carota |
| AAC49188.2 | U29333 | Pisum sativum | AAF63202.1 | AF240679 | Cucumis sativus |
| AAG44132.1 | AF218296 | Pisum sativum | AB71417.1 | U81287 | Pisum sativum |
| CAA64635.1 | X95342 | Nicotiana tabacum | BAA22083.1 | D28862 | Nicotiana sylvestris |
| AAC39454.1 | AF014802 | Eschscholzia californica | CAB75429.1 | AJ272011 | Nicotiana plumbaginifolia |
| AB94590.1 | AF022461 | Glycine max | BAA12064.1 | D83696 | Nicotiana sylvestris |
| AAA32913.1 | M32885 | Persea americana | AAA75104.1 | U32310 | Triticum aestivum |
| BAA84072.1 | AB028152 | Torenia hybrida | BAA03742.1 | D16205 | Nicotiana sylvestris |
| BAA13076.1 | D86351 | Glycine max | CAA8558.1 | Z48624 | Hordeum vulgare |
| BAA84071.1 | AB028151 | Antirrhinum majus | AAG23220.1 | AF310215 | Sorghum bicolor |
| AAC32274.1 | AF081575 | Petunia x hybrida | SEQ ID NO. 1961 | | |
| CAA50155.1 | X70824 | Solanum melongena | AAG27547.1 | AF269128 | Brassica nigra |
| CAA70575.1 | Y09423 | Nepeta racemosa | AAC27695.1 | AF016010 | Brassica napus |
| BAA92894.1 | AB006790 | Petunia x hybrida | AAC27694.1 | AF016009 | Brassica napus |
| AB94587.1 | AF022458 | Glycine max | AAC27696.1 | AF016011 | Brassica napus |
| SEQ ID NO. 1960 | | | AAG27546.1 | AF269126 | Brassica nigra |
| BAA01887.1 | D11111 | Nicotiana sylvestris | AAG24863.1 | AF300700 | Ipomoea nil |
| BAA01886.1 | D11110 | Nicotiana tabacum | AAC99310.1 | AF052585 | Malus x domestica |
| CAA11894.1 | AJ224325 | Hordeum vulgare | AAC99309.1 | AF052584 | Malus x domestica |
| BAA22411.1 | D38485 | Triticum aestivum | AAC35496.1 | AF052690 | Raphanus sativus |
| CAA06469.1 | AJ005286 | Hordeum vulgare | AAD22518.1 | AF001136 | Pinus radiata |
| CAA66479.1 | X97905 | Vicia faba | AAK14948.1 | AF230669 | Brassica napus |
| CAA46233.1 | X65117 | Nicotiana plumbaginifolia | AAK14950.1 | AF230671 | Brassica oleracea |
| | | | AAK14947.1 | AF230668 | Brassica napus |

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| AAK14949.1 | AF230670 | Brassica rapa | AAC78393.1 | U83670 | Oryza sativa |
| SEQ ID NO. 1962 | | | CAA31785.1 | X13431 | Triticum aestivum |
| AAA33975.1 | M11395 | Glycine max | CAA63570.1 | X92983 | Pseudotsuga menziesii |
| CRA41547.1 | X58711 | Medicago sativa | AAC78394.1 | U83671 | Oryza sativa |
| AAB03893.1 | M11318 | Glycine max | CAA63571.1 | X92984 | Pseudotsuga menziesii |
| AAA33672.1 | M33899 | Pisum sativum | | | |
| CAA25578.1 | X01104 | Glycine max | SEQ ID NO. 1965 | | |
| CAB55634.2 | AJ237596 | Helianthus annuus | AAD03415.1 | AF069494 | Sinapis alba |
| BAA33062.1 | AB017273 | Cuscuta japonica | AAA85440.1 | U32624 | Sorghum bicolor |
| AAA33974.1 | M11317 | Glycine max | AAF27289.1 | AF140613 | Manihot esculenta |
| AAD30454.1 | AF123257 | Lycopersicon esculentum | AAF27290.1 | AF140614 | Manihot esculenta |
| AAD30452.1 | AF123255 | Lycopersicon esculentum | AAF66543.1 | AF140609 | Triglochin maritimum |
| CAA39603.1 | X56138 | Lycopersicon esculentum | AAF66544.1 | AF140610 | Triglochin maritimum |
| AAD30453.1 | AF123256 | Lycopersicon esculentum | BAA92894.1 | AB006790 | Petunia x hybrida |
| CAA37847.1 | X53851 | Daucus carota | AAD56282.1 | AF155332 | Petunia x hybrida |
| AAA33671.1 | M33900 | Pisum sativum | CAA50155.1 | X70824 | Solanum melongena |
| AAF34133.1 | AF161179 | Malus x domestica | AAC32274.1 | AF081575 | Petunia x hybrida |
| CAA41546.1 | X58710 | Medicago sativa | AAA32913.1 | M32885 | Persea americana |
| AAB63310.1 | U46544 | Helianthus annuus | CAA64635.1 | X95342 | Nicotiana tabacum |
| AAB63311.1 | U46545 | Helianthus annuus | CAA65580.1 | X96784 | Nicotiana tabacum |
| CAB08441.1 | Z95153 | Helianthus annuus | AAB94587.1 | AF022458 | Glycine max |
| CAA42222.1 | X59701 | Helianthus annuus | AAB17562.1 | U72654 | Eustoma grandiflorum |
| AAC39360.1 | U63631 | Fragaria x ananassa | AAG09208.1 | AF175278 | Pisum sativum |
| AAA33910.1 | M80939 | Oryza sativa | AAD37433.1 | AF150881 | Lycopersicon esculentum x |
| CAA37848.1 | X53852 | Daucus carota | Lycopersicon peruvianum | | |
| AAA33909.1 | M80938 | Oryza sativa | CAA04117.1 | AJ000478 | Helianthus tuberosus |
| CAA43210.1 | X60820 | Oryza sativa | CAA04116.1 | AJ000477 | Helianthus tuberosus |
| CAA37864.1 | X53870 | Chenopodium rubrum | CAB43505.1 | AJ239051 | Cicer arietinum |
| AAD49336.1 | AF166277 | Nicotiana tabacum | AAC49188.2 | U29333 | Pisum sativum |
| AAA61632.1 | U08601 | Papaver somniferum | AAG14963.1 | AF214009 | Brassica napus |
| AAB72109.1 | AF022217 | Brassica rapa | AAD38930.1 | AF135485 | Glycine max |
| CAA63902.1 | X94192 | Pennisetum glaucum | AAG14962.1 | AF214008 | Brassica napus |
| AAB39856.1 | U81385 | Oryza sativa | AAG44132.1 | AF218296 | Pisum sativum |
| CAA46641.1 | X65725 | Zea mays | AAB94588.1 | AF022459 | Glycine max |
| CAA08908.1 | AJ009880 | Castanea sativa | AAG14961.1 | AF214007 | Brassica napus |
| CAA63903.1 | X94193 | Pennisetum glaucum | AAB94590.1 | AF022461 | Glycine max |
| CAB36910.1 | AJ000691 | Quercus suber | BAA84071.1 | AB028151 | Antirrhinum majus |
| CAA63901.1 | X94191 | Pennisetum glaucum | CAA50442.1 | X71130 | Petunia x hybrida |
| AAC78392.1 | U83669 | Oryza sativa | SEQ ID NO. 1966 | | |
| BAA02160.1 | D12635 | Oryza sativa | AAG38521.1 | AF283536 | Citrus x paradisi |

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| AAA97905.1 | U51853 | Glycine max | AAD32650.1 | AF136941 | Hordeum vulgare |
| CAA79954.1 | Z21954 | Vigna unguiculata | BAA74583.1 | AB011266 | Hordeum vulgare |
| AAB66355.1 | U54702 | Oryza sativa | BAB17826.1 | AB046401 | Oryza sativa |
| AAB24010.1 | S49967 | Oryza | BAB17823.1 | AB023818 | Oryza sativa |
| CAA60610.1 | X87126 | Zea mays | BAA74586.1 | AB011269 | Hordeum vulgare |
| BAA09666.1 | D63342 | Zea mays | BAA74588.2 | AB021746 | Oryza sativa |
| AAA32672.1 | L16624 | Ambrosia artemisiifolia | BAB17825.1 | AB046401 | Oryza sativa |
| BAA07327.1 | D38130 | Zea mays | BAA74587.1 | AB019525 | Hordeum vulgare |
| AAA97907.1 | U51855 | Glycine max | BAA74585.1 | AB011268 | Hordeum vulgare |
| BAB18766.1 | AB038392 | Triticum aestivum | BAA74580.1 | AB010086 | Hordeum vulgare |
| BAB18767.1 | AB038393 | Triticum aestivum | BAA74584.1 | AB011267 | Hordeum vulgare |
| CAA11899.1 | AJ224331 | Castanea sativa | SEQ ID NO. 1968 | | |
| AAB71505.1 | U82220 | Pyrus communis | AAD49420.1 | AF172681 | Canavalia lineata |
| CAA60634.1 | X87168 | Sorghum bicolor | CAA08855.1 | AJ009825 | Cicer arietinum |
| BAB18765.1 | AB038391 | Triticum aestivum | AAA62490.1 | I39931 | Pisum sativum |
| BAB18768.1 | AB038394 | Triticum aestivum | BAA77206.1 | AB026253 | Pisum sativum |
| AAC37479.1 | L41355 | Brassica rapa | AAB34918.2 | S78994 | Lens culinaris |
| BAA28867.1 | AB014760 | Cucumis sativus | CAA06833.1 | AJ006052 | Cicer arietinum |
| AAD33907.1 | AF143677 | Artemisia vulgaris | CAA45526.1 | X64201 | Lens culinaris |
| BAA89582.1 | AP001073 | Oryza sativa | AAD40979.1 | AF089851 | Glycine max |
| CAA72790.1 | Y12068 | Hordeum vulgare | AAD51007.1 | AF171698 | Euphorbia characias |
| AAA96316.1 | U51119 | Brassica rapa | SEQ ID NO. 1969 | | |
| AAK15090.1 | AF240007 | Sesamum indicum | AAC98091.1 | AF067401 | Oryza sativa |
| AAF23127.1 | AF198389 | Lycopersicon esculentum | AAG13663.1 | AF263457 | Zea mays |
| BAA19610.1 | D64115 | Glycine max | BAB39155.1 | AB048713 | Pisum sativum |
| BAA19608.1 | D31700 | Glycine max | AAC98090.1 | AF067400 | Zea mays |
| CAA89697.1 | Z49697 | Ricinus communis | BAA90816.1 | AP001168 | Oryza sativa |
| AAF72202.1 | AF265551 | Manihot esculenta | SEQ ID NO. 1977 | | |
| AAA97906.1 | U51854 | Glycine max | BAA78764.1 | AB023482 | Oryza sativa |
| CAA50437.1 | X71124 | Carica papaya | BAA94510.1 | AB041504 | Populus nigra |
| AAF23126.1 | AF198388 | Lycopersicon esculentum | AAF43496.1 | AF131222 | Lophopyrum elongatum |
| AAD13812.1 | AF117334 | Ipomoea batatas | AAK11674.1 | AF339747 | Lophopyrum elongatum |
| AAF64480.1 | AF241536 | Ipomoea batatas | BAA94509.1 | AB041503 | Populus nigra |
| AAK30004.1 | AY028994 | Dianthus caryophyllus | AAG16628.1 | AY007545 | Brassica napus |
| BAB18769.1 | AB038395 | Triticum aestivum | AAK21965.1 | AY028699 | Brassica napus |
| AAC32853.1 | AF083253 | Lycopersicon esculentum | AAG03090.1 | AC073405 | Oryza sativa |
| SEQ ID NO. 1967 | | | CAB51834.1 | 00069 | Oryza sativa |
| CAB42052.1 | AJ242045 | Lycopersicon esculentum | AAC61805.1 | U28007 | Lycopersicon esculentum |
| AAD32651.1 | AF136942 | Hordeum vulgare | | | |
| BAB17824.1 | AB023819 | Oryza sativa | | | |

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| AAF91337.1 | AAF249318 | Glycine max | BAA13608.1 | D88399 | Oryza sativa |
| AAF91336.1 | AF249317 | Glycine max | AAG60195.1 | AC084763 | Oryza sativa |
| AAF66615.1 | AF142596 | Nicotiana tabacum | BAA19573.1 | AB002109 | Oryza sativa |
| CAA97692.1 | Z73295 | Catharanthus roseus | AAB58348.1 | U29095 | Triticum aestivum |
| AAK11567.1 | AF318491 | Lycopersicon hirsutum | AAD00240.1 | U73939 | Nicotiana tabacum |
| AAB47421.1 | U59316 | Lycopersicon esculentum | AAA96325.1 | M94726 | Triticum aestivum |
| AAF76313.1 | AF220603 | Lycopersicon esculentum | CAA81443.1 | Z26846 | Mesembryanthemum crystalli |
| AAC27894.1 | AF023164 | Zea mays | AAB68962.1 | L38855 | Glycine max |
| AAK11566.1 | AF318490 | Lycopersicon hirsutum | AAF27340.1 | AF186020 | Vicia faba |
| AAC27895.1 | AF023165 | Zea mays | CAA89202.1 | Z49233 | Chlamydomonas eugametos |
| AAF76306.1 | AF220602 | Lycopersicon hirsutum | CRA06503.1 | AJ005373 | Craterostigma plantagineum |
| AAB47424.1 | U59317 | Lycopersicon pimpinellifolium | SEQ ID NO. 1979 | | |
| AAF76307.1 | AF220602 | Lycopersicon pimpinellifolium | AAF13739.1 | AF108435 | Papaver somniferum |
| AAC48914.1 | U02271 | Lycopersicon pimpinellifolium | AAF13736.1 | AF108432 | Papaver somniferum |
| AAB47423.1 | U59315 | Lycopersicon pimpinellifolium | AAF13738.1 | AF108434 | Papaver somniferum |
| AAG25966.1 | AF302082 | Lycopersicon pimpinellifolium | AAF13737.1 | AF108433 | Papaver somniferum |
| AAF34428.1 | AF172282 | Nicotiana tabacum | CAA39261.1 | X55730 | Glycine max |
| CAA73134.1 | Y12531 | Oryza sativa | CAA57783.1 | X82367 | Medicago sativa |
| AAG33377.1 | AF290411 | Brassica oleracea | AAB41556.1 | U13925 | Medicago sativa subsp. sativa |
| BAA92954.1 | AP001551 | Oryza sativa | CAA57784.1 | X82368 | Medicago sativa |
| SEQ ID NO. 1978 | | | CAA57782.1 | X82366 | Medicago sativa |
| BAA34675.1 | AB011670 | Triticum aestivum | AAB41555.1 | U13924 | Medicago sativa subsp. sativa |
| BAA83688.1 | AB011967 | Oryza sativa | BAA12084.1 | D83718 | Glycyrrhiza echinata |
| AAF22219.1 | AF141378 | Zea mays | BAA13114.1 | D86559 | Glycyrrhiza glabra |
| BAA83689.1 | AB011968 | Oryza sativa | BAA13113.1 | D86558 | Glycyrrhiza glabra |
| CAA73068.1 | Y12465 | Sorghum bicolor | AAD22264.1 | AF133841 | Xerophyta viscosa |
| CAA73067.1 | Y12464 | Sorghum bicolor | AAA21751.1 | L12042 | Bromus inermis |
| AAB62693.1 | AF004947 | Oryza sativa | CAA40747.1 | X57526 | Hordeum vulgare |
| BAA96628.1 | AP002482 | Oryza sativa | CAA88322.1 | Z48360 | Hordeum vulgare |
| CAA71142.1 | Y10036 | Cucumis sativus | AAC49138.1 | U21747 | Avena fatua |
| AAD23582.1 | AF128443 | Glycine max | AAG15839.2 | AF055910 | Orobancha ramosa |
| CAA57898.1 | X82548 | Hordeum vulgare | AAB97617.1 | U83687 | Apium graveolens |
| BAA05649.1 | D26602 | Nicotiana tabacum | CAA88591.1 | Z48672 | Sesbania rostrata |
| AAC93329.1 | AF062479 | Oryza sativa | AAF13741.1 | AF108437 | Papaver somniferum |
| CRA65244.1 | X95997 | Solanum tuberosum | AAG31150.1 | AF308853 | Lotus corniculatus |
| AAB05457.1 | U55768 | Oryza sativa | BAA76417.1 | AB024989 | Cicer arietinum |
| CAA46554.1 | X65604 | Hordeum vulgare | AAG31151.1 | AF308854 | Lotus corniculatus |
| CAA07813.1 | AJ007990 | Hordeum vulgare | AAF13740.1 | AF108436 | Papaver somniferum |
| CRA46556.1 | X65606 | Hordeum vulgare | SEQ ID NO. 1980 | | |
| AAD00239.1 | U73938 | Nicotiana tabacum | | | |

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|-------------|----------|----------------------------|-------------------------|----------|----------------------------|
| CAB94692.1 | AJ242742 | Ipomoea batatas | CAA71492.1 | Y10466 | Spinacia oleracea |
| AAD37430.1 | AF149280 | Phaseolus vulgaris | AAF63027.1 | AF244924 | Spinacia oleracea |
| CAA66037.1 | X97351 | Populus balsamifera subsp. | BAA77389.1 | AB024439 | Scutellaria baicalensis |
| trichocarpa | | | BAA77388.1 | AB024438 | Scutellaria baicalensis |
| BAA06335.1 | D30653 | Populus kitakamiensis | AAAB02554.1 | L37790 | Stylosanthes humilis |
| AAA34108.1 | J02979 | Nicotiana tabacum | AAF63026.1 | AF244923 | Spinacia oleracea |
| BAA01992.1 | D11396 | Nicotiana tabacum | | | |
| CAA66034.1 | X97348 | Populus balsamifera subsp. | SEQ ID NO. 1981 | | |
| trichocarpa | | | AAD10204.1 | AF030260 | Vicia sativa |
| AAB47602.1 | L07554 | Linum usitatissimum | AAG17470.1 | AF123609 | Triticum aestivum |
| BAA11853.1 | D83225 | Populus nigra | AAG33645.1 | AF092917 | Vicia sativa |
| CAA50597.1 | X71593 | Lycopersicon esculentum | AAK31592.1 | AY029178 | Brassica rapa subsp. pekin |
| CAB67121.1 | Y19023 | Lycopersicon esculentum | CAB41474.1 | AJ238402 | Catharanthus roseus |
| BAA11852.1 | D83224 | Populus nigra | AAB94588.1 | AF022459 | Glycine max |
| CAA66035.1 | X97349 | Populus balsamifera subsp. | AAB94586.1 | AF022457 | Glycine max |
| trichocarpa | | | AAA32913.1 | M32885 | Persea americana |
| AAD37427.1 | AF149277 | Phaseolus vulgaris | CAA89260.1 | Z49263 | Pisum sativum |
| BAA01877.1 | D11102 | Populus kitakamiensis | BAA12159.1 | D83968 | Glycine max |
| CAA66036.1 | X97350 | Populus balsamifera subsp. | BAB40323.1 | AB037244 | Asparagus officinalis |
| trichocarpa | | | CAA70576.1 | Y09424 | Nepeta racemosa |
| CAA62225.1 | X90692 | Medicago sativa | BAB40324.1 | AB037245 | Asparagus officinalis |
| AAB97734.1 | AF014502 | Glycine max | AAD37433.1 | AF150881 | Lycopersicon esculentum x |
| CAA62226.1 | X90693 | Medicago sativa | Lycopersicon peruvianum | | |
| CAA62227.1 | X90694 | Medicago sativa | CAB56503.1 | AJ238612 | Catharanthus roseus |
| BAA06334.1 | D30652 | Medicago sativa | CAA70575.1 | Y09423 | Nepeta racemosa |
| BAA07241.1 | D38051 | Populus kitakamiensis | AAB94589.1 | AF022460 | Glycine max |
| AAB41810.1 | L36156 | Populus kitakamiensis | AAD56282.1 | AF155332 | Petunia x hybrida |
| AAB41811.1 | L36157 | Medicago sativa | AAG14963.1 | AF214009 | Brassica napus |
| BAA14144.1 | D90116 | Medicago sativa | AAG14961.1 | AF214007 | Brassica napus |
| AAC98519.1 | AF007211 | Armoracia rusticana | AAG14962.1 | AF214008 | Brassica napus |
| BAA02840.1 | D13683 | Glycine max | CAA50648.1 | X71657 | Solanum melongena |
| BAA14143.1 | D90115 | Populus kitakamiensis | AAC48987.1 | U09610 | Berberis stolonifera |
| AAA33129.1 | M91372 | Armoracia rusticana | CAA57423.1 | X81829 | Zea mays |
| BAA08499.1 | D49551 | Cucumis sativus | CAA72208.1 | Y11404 | Zea mays |
| AAA34101.1 | L02124 | Oryza sativa | BAA13076.1 | D86351 | Glycine max |
| CAA76680.1 | Y17192 | Nicotiana tabacum | CAB41490.1 | AJ238439 | Cicer arietinum |
| CAA40796.1 | X57564 | Cucurbita pepo | BAB40322.1 | AB036772 | Triticum aestivum |
| AAA33121.1 | M32742 | Armoracia rusticana | CAA10067.1 | AJ012581 | Cicer arietinum |
| BAA82306.1 | AB027752 | Cucumis sativus | BAA84916.1 | AB032833 | Cicer arietinum |
| AAD43561.1 | AF155124 | Nicotiana tabacum | CAA04117.1 | AJ000478 | Helianthus tuberosus |
| AAB06183.1 | M37636 | Gossypium hirsutum | CAA04116.1 | AJ000477 | Helianthus tuberosus |
| | | Arachis hypogaea | | | |

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| AAAF22256.1 | AF161711 | Pimpinella brachycarpa | CAA61946.1 | X89828 | Pisum sativum |
| BAA88222.1 | AB028650 | Nicotiana tabacum | CAA46649.1 | X65742 | Spinacia oleracea |
| CAA67575.1 | X99134 | Lycopersicon esculentum | BAA02729.1 | D13512 | Oryza sativa |
| CAA78387.1 | Z13997 | Petunia x hybrida | BAA08830.1 | D50301 | Oryza sativa |
| BAA81736.1 | AB029165 | Glycine max | BAA08845.1 | D50307 | Oryza sativa |
| CAA72217.1 | Y11414 | Oryza sativa | CAA37290.1 | X53130 | Oryza sativa |
| AAB41101.1 | U72762 | Nicotiana tabacum | CAA06308.1 | AJ005041 | Cicer arietinum |
| BAA88223.1 | AB028651 | Nicotiana tabacum | CAA61947.1 | X89829 | Pisum sativum |
| CAA72185.1 | Y11350 | Oryza sativa | CAC34412.1 | Y18576 | Flaveria trinervia |
| AAG13574.1 | AC037425 | Oryza sativa | BAA78593.1 | AU066535 | Chlamydomonas sp. HS-5 |
| AAK19618.1 | AF336285 | Gossypium hirsutum | BAA76430.1 | AB025002 | Cicer arietinum |
| BAA23340.1 | D88620 | Oryza sativa | | | |
| CAA65525.1 | X96749 | Oryza sativa | SEQ ID NO. 1996 | | |
| CAA64615.1 | X95297 | Lycopersicon esculentum | CAA71238.1 | Y10156 | Brassica napus |
| AAK19615.1 | AF336282 | Gossypium hirsutum | CAA71237.1 | Y10155 | Brassica napus |
| CAA66952.1 | X98308 | Lycopersicon esculentum | CAB62165.1 | AJ223307 | Brassica napus |
| AAK19617.1 | AF336284 | Gossypium hirsutum | AAC49181.1 | U39289 | Brassica napus |
| AAA33500.1 | M73028 | Zea mays | AAC49182.1 | U39319 | Brassica napus |
| AAG36774.1 | AF210616 | Zea mays | | | |
| | | | SEQ ID NO. 1997 | | |
| SEQ ID NO. 1995 | | | BAA12159.1 | D83968 | Glycine max |
| BAA77603.1 | AB027002 | Nicotiana paniculata | AAC32274.1 | AF081575 | Petunia x hybrida |
| BAA77604.1 | AB027001 | Nicotiana paniculata | AAA32913.1 | M32885 | Persea americana |
| CAA71408.1 | Y10380 | Solanum tuberosum | BAA13076.1 | D86351 | Glycine max |
| BAA02730.1 | D13513 | Oryza sativa | CAA64635.1 | X95342 | Nicotiana tabacum |
| AAA33642.1 | M97476 | Pisum sativum | CAA65580.1 | X96784 | Nicotiana tabacum |
| AAA33643.1 | M97477 | Pisum sativum | AAD56282.1 | AF155332 | Petunia x hybrida |
| AAAF74220.1 | AF216582 | Avena sativa | BAB12433.1 | AB025030 | Coptis japonica |
| CAA47293.1 | X66814 | Spinacia oleracea | AAG44132.1 | AF218296 | Pisum sativum |
| AAK19325.1 | AF329674 | Dunaliella salina | CAA50155.1 | X70824 | Solanum melongena |
| AAK19324.1 | AF329673 | Dunaliella salina | AAB17562.1 | U72654 | Eustoma grandiflorum |
| CAA49590.1 | X69969 | Chlamydomonas reinhardtii | AAF05621.1 | AF191772 | Papaver somniferum |
| AAC60574.1 | S72951 | Chloroplast Chlamydomonas | CAB56503.1 | AJ238612 | Catharanthus roseus |
| reinhartii | | | CAA70575.1 | Y09423 | Nepeta racemosa |
| CAA09669.1 | AJ011516 | Scherffelia dubia | BAA74466.1 | AB022733 | Glycyrrhiza echinata |
| AAB70542.1 | AF017362 | Oryza sativa | CAA50648.1 | X71657 | Solanum melongena |
| AAG21429.1 | AF308587 | Fragaria x ananassa | BAA22423.1 | AB001380 | Glycyrrhiza echinata |
| AAB61592.1 | AF003124 | Mesembryanthemum crystallinum | BAB40324.1 | AB037245 | Asparagus officinalis |
| CAB77243.2 | AJ133146 | Persea americana | AAB94588.1 | AF022459 | Glycine max |
| CAA31366.1 | X12872 | Zea mays | AAG14961.1 | AF214007 | Brassica napus |
| AAA33435.1 | M16220 | Zea mays | BAB40323.1 | AB037244 | Asparagus officinalis |

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| AAC39452.1 | AF014800 | Eschscholzia californica | AAF23556.1 | AF110458 | Barbarea vulgaris |
| AAG14962.1 | AF214008 | Brassica napus | AAF23555.1 | AF110457 | Arabis turrita |
| BAA84072.1 | AB028152 | Torenia hybrida | AAF23538.1 | AF110440 | Arabidopsis griffithiana |
| AAC39453.1 | AF014801 | Eschscholzia californica | AAF23524.1 | AF110426 | Arabis alpina |
| AAD47832.1 | AF166332 | Nicotiana tabacum | AAF23543.1 | AF110445 | Arabis hirsuta |
| | | | AAF23525.1 | AF110427 | Arabis alpina |
| SEQ ID NO. 1999 | | | AAF23527.1 | AF110429 | Arabis alpina |
| AAB01567.1 | I47672 | Picea glauca | AAF23535.1 | AF110437 | Arabis drummondii |
| | | | AAF23553.1 | AF110455 | Arabis procurrens |
| SEQ ID NO. 2000 | | | AAF23544.1 | AF110446 | Arabis jacquinii |
| BAA22976.1 | D63457 | Arabis gemmifera | AAF23526.1 | AF110428 | Arabis alpina |
| BAA22973.1 | D63454 | Arabis gemmifera | AAF23528.1 | AF110430 | Cardamine amara |
| AAF23537.1 | AF110439 | Arabis glabra | AAF23552.1 | AF110454 | Arabis procurrens |
| BAA22978.1 | D63459 | Arabis gemmifera | AAF23542.1 | AF110444 | Arabis hirsuta |
| BAA22974.1 | D63455 | Arabis gemmifera | AAC79418.1 | AF037560 | Leavenworthia stylosa |
| AAF23540.1 | AF110442 | Arabidopsis halleri | BAA34682.1 | AB015504 | Arabidopsis griffithiana |
| AAF23551.1 | AF110453 | Arabidopsis lyrata subsp. | BAA34685.1 | AB015507 | Arabidopsis suecica |
| petraea | | | BAA34683.1 | AB015505 | Arabidopsis korshinskyi |
| lemhiensis | | | CAB72921.1 | AJ251281 | Arabidopsis lyrata subsp. |
| BAA22975.1 | D63456 | Halimolobos perplexa var. | petraea | | |
| AAF23546.1 | AF110448 | Arabis gemmifera | CAB72920.1 | AJ251280 | Arabidopsis lyrata subsp. |
| AAF23548.1 | AF110450 | Arabis lyallii | petraea | | |
| AAF23550.1 | AF110452 | Arabis parishii | CAB72919.1 | AJ251279 | Arabidopsis lyrata subsp. |
| petraea | | | petraea | | |
| BAA22972.1 | D63453 | Arabis gemmifera | CAB72918.1 | AJ251278 | Arabidopsis lyrata subsp. |
| BAA22971.1 | D63452 | Arabis gemmifera | petraea | | |
| BAA22977.1 | D63458 | Arabis gemmifera | CAB72917.1 | AJ251277 | Arabidopsis lyrata subsp. |
| AAF23549.1 | AF110451 | Arabis pauciflora | petraea | | |
| AAF23545.1 | AF110447 | Arabis lignifera | CAB72916.1 | AJ251276 | Arabidopsis lyrata subsp. |
| AAF23536.1 | AF110438 | Arabis fendleri | petraea | | |
| AAF23541.1 | AF110443 | Arabis hirsuta | SEQ ID NO. 2001 | | |
| AAF23531.1 | AF110433 | Arabis blepharophylla | AAG43286.1 | AF140228 | Oryza sativa |
| AAF23530.1 | AF110432 | Arabis blepharophylla | AAA33944.1 | J03920 | Glycine max |
| AAF23523.1 | AF110425 | Aubrieta deltoidea | CAA48299.1 | X68217 | Pisum sativum |
| AAF23529.1 | AF110431 | Arabis blepharophylla | CAA48300.1 | X68218 | Pisum sativum |
| AAF23547.1 | AF110449 | Arabidopsis lyrata subsp. | CAA48297.1 | X68215 | Pisum sativum |
| lyrata | | | SEQ ID NO. 2005 | | |
| AAF23533.1 | AF110435 | Capsella rubella | BAA21923.1 | AB006601 | Petunia x hybrida |
| AAF23534.1 | AF110436 | Arabis drummondii | BAA21922.1 | AB006600 | Petunia x hybrida |
| AAF23532.1 | AF110434 | Brassica oleracea | BAA21921.1 | AB006599 | Petunia x hybrida |
| | | | BAA19110.1 | AB000451 | Petunia x hybrida |

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| BAA21926.1 | AB006604 | Petunia x hybrida | CAA63543.1 | X92967 | Nicotiana tabacum |
| BAA21925.1 | AB006603 | Petunia x hybrida | CAA63542.1 | X92966 | Nicotiana tabacum |
| BAA21924.1 | AB006602 | Petunia x hybrida | CAA44632.1 | X62820 | Glycine max |
| BAA21920.1 | AB006598 | Petunia x hybrida | CAA44188.1 | X62303 | Glycine max |
| BAA19111.1 | AB000452 | Petunia x hybrida | CAB46641.1 | AJ243451 | Lycopersicon esculentum |
| BAA96071.1 | AB035133 | Petunia x hybrida | AAC50013.1 | U50064 | Zea mays |
| BAA21927.1 | AB006605 | Petunia x hybrida | CAA81232.1 | Z26331 | Glycine max |
| BAA96070.1 | AB035132 | Petunia x hybrida | CAB46642.1 | AJ243452 | Lycopersicon esculentum |
| BAA21919.1 | AB006597 | Petunia x hybrida | CAA71243.1 | Y10161 | Chenopodium rubrum |
| AAK01713.1 | AF332876 | Oryza sativa | AAA20237.1 | U10077 | Zea mays |
| AAC06243.1 | AF053077 | Nicotiana tabacum | CAA99990.1 | Z75660 | Sesbania rostrata |
| BAA05079.1 | D26086 | Petunia x hybrida | BAA96590.1 | AP002481 | Oryza sativa |
| BAA05078.1 | D26085 | Petunia x hybrida | BAA86628.1 | AB024986 | Oryza sativa |
| BAA05076.1 | D26083 | Petunia x hybrida | AAC61888.1 | U24193 | Lupinus luteus |
| BAA05077.1 | D26084 | Petunia x hybrida | AAD31789.1 | AF126106 | Lupinus luteus |
| BAA21928.1 | AB006606 | Petunia x hybrida | AAC61889.1 | U24194 | Lupinus luteus |
| BAA19114.1 | AB000455 | Petunia x hybrida | AAD31790.1 | AF126107 | Lupinus luteus |
| AAD26942.1 | AF119050 | Datisca glomerata | AAC24245.1 | U44857 | Lupinus luteus |
| BAA19112.1 | AB000453 | Petunia x hybrida | AAD31791.1 | AF126108 | Lupinus luteus |
| AAB53260.1 | U76554 | Brassica rapa | BAA09467.1 | D50871 | Glycine max |
| AAB53261.1 | U76555 | Brassica rapa | BAA09465.1 | D50869 | Glycine max |
| BAA19926.1 | AB000456 | Petunia x hybrida | CAA53728.1 | X76122 | Antirrhinum majus |
| | | | BAA20411.1 | D86386 | Catharanthus roseus |
| | | | BAA09466.1 | D50870 | Glycine max |
| | | | AAC41681.1 | L34207 | Petroselinum crispum |
| | | | CAB81558.1 | Z37978 | Nicotiana tabacum |
| | | | BAA11560.1 | D82349 | Adiantum capillus-veneris |
| | | | CAB58998.1 | AJ250315 | Petunia x hybrida |
| SEQ ID NO. 2008 | | | SEQ ID NO. 2009 | | |
| CAB61221.1 | AJ250396 | Antirrhinum majus | CAA75386.1 | Y15113 | Morinda citrifolia |
| CAA71244.1 | Y10162 | Chenopodium rubrum | CAA79855.1 | Z21792 | Lycopersicon esculentum |
| CAA09852.1 | AJ011892 | Nicotiana tabacum | CAA79856.1 | Z21793 | Lycopersicon esculentum |
| CAA09853.1 | AJ011893 | Nicotiana tabacum | | | |
| CAB60837.1 | AJ002589 | Lycopersicon esculentum | SEQ ID NO. 2010 | | |
| CAB61222.1 | AJ250397 | Antirrhinum majus | CAA71878.1 | Y10984 | Brassica juncea |
| CAB60838.1 | AJ002590 | Lycopersicon esculentum | AAB71231.1 | AF017984 | Lycopersicon esculentum |
| BAA33153.1 | AB008188 | Pisum sativum | AAF98157.1 | AF258320 | Phaseolus vulgaris |
| CAB60836.1 | AJ002588 | Lycopersicon esculentum | | | |
| CAB51788.1 | AJ245415 | Lycopersicon esculentum | | | |
| CAA61334.1 | X88864 | Medicago sativa | | | |
| CAB40540.1 | AJ132929 | Medicago sativa | | | |
| CAA09854.1 | AJ011894 | Nicotiana tabacum | | | |
| CAB61223.1 | AJ250398 | Antirrhinum majus | | | |
| CAB40541.1 | AJ132930 | Medicago sativa | | | |
| CAA09769.1 | AJ011776 | Chenopodium rubrum | SEQ ID NO. 2011 | | |
| CAA53729.1 | X76123 | Antirrhinum majus | AAB72109.1 | AF022217 | Brassica rapa |

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| CAA37847.1 | X53851 | Daucus carota | SEQ ID NO. 2016 | | |
| AAD49336.1 | AF166277 | Nicotiana tabacum | BAA77204.1 | AB026262 | Cicer arietinum |
| BAA33062.1 | AB017273 | Cuscuta japonica | AAG43550.1 | AF211532 | Nicotiana tabacum |
| CAB36910.1 | AJ000691 | Quercus suber | BAA78746.1 | AB023482 | Oryza sativa |
| CAA08908.1 | AJ009880 | Castanea sativa | | | |
| AAA33975.1 | M11395 | Glycine max | SEQ ID NO. 2017 | | |
| CAA25578.1 | X01104 | Glycine max | AAA33811.1 | L02830 | Solanum tuberosum |
| AAB03893.1 | M11318 | Glycine max | AAG43547.1 | AF211529 | Nicotiana tabacum |
| CAA41547.1 | X58711 | Medicago sativa | CAB63264.1 | AJ251808 | Lotus japonicus |
| AAB63310.1 | U46544 | Helianthus annuus | AAA92677.1 | U13736 | Pisum sativum |
| CAB08441.1 | Z95153 | Helianthus annuus | AAF31152.1 | AF078680 | Olea europaea |
| CAA42222.1 | X59701 | Helianthus annuus | AAD10245.1 | AF030033 | Phaseolus vulgaris |
| CAA37848.1 | X53852 | Daucus carota | AAF31151.1 | AF078679 | Olea europaea |
| AAC39360.1 | U63631 | Fragaria x ananassa | AAA19571.1 | U10150 | Brassica napus |
| AAA33672.1 | M33899 | Pisum sativum | AAC49587.1 | U49105 | Triticum aestivum |
| AAB63311.1 | U46545 | Helianthus annuus | AAC49586.1 | U49104 | Triticum aestivum |
| AAA33974.1 | M11317 | Glycine max | AAC49585.1 | U49103 | Triticum aestivum |
| CAA63903.1 | X94193 | Pennisetum glaucum | AAC49584.1 | U48693 | Triticum aestivum |
| AAA61632.1 | U08601 | Papaver somniferum | AAC49580.1 | U48689 | Triticum aestivum |
| CAB55634.2 | AJ237596 | Helianthus annuus | AAC49579.1 | U48688 | Triticum aestivum |
| AAC78392.1 | U83669 | Oryza sativa | AAC49578.1 | U48242 | Triticum aestivum |
| AAA33910.1 | M80939 | Oryza sativa | AAA85157.1 | U20297 | Solanum tuberosum |
| BAA02160.1 | D12635 | Oryza sativa | AAA85156.1 | U20296 | Solanum tuberosum |
| CAA43210.1 | X60820 | Oryza sativa | AAA62351.1 | U20295 | Solanum tuberosum |
| CAA37864.1 | X53870 | Chenopodium rubrum | AAA85155.1 | U20294 | Solanum tuberosum |
| AAA33909.1 | M80938 | Oryza sativa | AAA33900.1 | L18914 | Oryza sativa |
| AAC78393.1 | U83670 | Oryza sativa | AAA92681.1 | U13882 | Pisum sativum |
| AAB39856.1 | U81385 | Oryza sativa | CAA78288.1 | Z12828 | Oryza sativa |
| AAD30454.1 | AF123257 | Lycopersicon esculentum | | | |
| AAA33671.1 | M33900 | Pisum sativum | SEQ ID NO. 2019 | | |
| AAC78394.1 | U83671 | Oryza sativa | CAA71003.1 | Y09876 | Nicotiana tabacum |
| CAA63901.1 | X94191 | Pennisetum glaucum | AAG43988.1 | AF215823 | Zea mays |
| CAA63902.1 | X94192 | Pennisetum glaucum | AAF73828.1 | AF162665 | Oryza sativa |
| AAD30452.1 | AF123255 | Lycopersicon esculentum | BAB19052.1 | AB044537 | Oryza sativa |
| CAA46641.1 | X65725 | Zea mays | BAA96793.1 | AB030939 | Oryza sativa |
| CAA39603.1 | X56138 | Lycopersicon esculentum | BAA96794.1 | AB037421 | Oryza sativa |
| CAA63570.1 | X92983 | Pseudotsuga menziesii | AAB41696.1 | U69142 | Spinacia oleracea |
| AAD30453.1 | AF123256 | Lycopersicon esculentum | AAA34025.1 | M31480 | Spinacia oleracea |
| CAA63571.1 | X92984 | Pseudotsuga menziesii | CAA41377.1 | X58463 | Beta vulgaris |
| CAA31785.1 | X13431 | Triticum aestivum | CAA41376.1 | X58462 | Beta vulgaris |
| CAA53286.1 | X75616 | Oryza sativa | | | |

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| CAA49425.1 | X69770 | Atriplex hortensis | AAA33392.1 | M12152 | Lemna gibba |
| BAAB18544.1 | AB043540 | Avicennia marina | CAA32109.1 | X13909 | Oryza sativa |
| ABA58165.1 | AF000132 | Amaranthus hypochondriacus | AAF20948.1 | AF207690 | Daucus carota |
| ABA70010.1 | AF017150 | Amaranthus hypochondriacus | AAA33636.1 | M23532 | Physcomitrella patens |
| BAA21098.1 | AB001348 | Oryza sativa | AAC25775.1 | AF072931 | Medicago sativa |
| BAAB18543.1 | AB043539 | Avicennia marina | CAA50763.1 | X71965 | Pyrobotrys stellata |
| BAA05466.1 | D26448 | Hordeum vulgare | CAA44881.1 | X63197 | Hordeum vulgare |
| AAC49268.1 | U12196 | Sorghum bicolor | CAA42818.1 | X60275 | Lycopersicon esculentum |
| AAC49267.1 | U12195 | Sorghum bicolor | AAD27877.1 | AF139465 | Vigna radiata |
| AAB33843.1 | S77096 | Brassica napus | CAA49149.1 | X69215 | Pisum sativum |
| CAA53076.1 | X75327 | Pisum sativum | CAA38025.1 | X54090 | Gossypium hirsutum |
| AAF08296.1 | AF196292 | Apium graveolens | AAF89205.1 | AF279248 | Vigna radiata |
| AAB47571.1 | U87848 | Nicotiana plumbaginifolia | CAA57408.1 | X81809 | Picea abies |
| AG43027.1 | AF323586 | Oryza sativa | CAA49209.1 | X69434 | Pyrobotrys stellata |
| CAAS3075.1 | X75326 | Zea mays | BAA77273.1 | AB026686 | Physcomitrella patens |
| AAC03055.1 | AF045770 | Oryza sativa | AAB61237.1 | AF003128 | Mesembryanthemum crystallinum |
| AAB47996.1 | U87982 | Sorghum bicolor | BAA00536.1 | D00641 | Oryza sativa |
| | | | CAA39883.1 | X56538 | Pisum sativum |
| | | | CAA43804.1 | X61610 | Brassica napus |
| | | | CAA57409.1 | X81810 | Picea abies |
| | | Nicotiana tabacum | AAA34142.1 | M17559 | Lycopersicon esculentum |
| | | Glycine max | AAB19040.1 | U51632 | Pinus palustris |
| | | Oryza sativa | CAA28639.1 | X04966 | Petunia x hybrida |
| | | | AAB18209.1 | U73218 | Triticum aestivum |
| | | Solanum tuberosum | CAA84525.1 | 235160 | Solanum tuberosum |
| | | Oryza sativa | | | |
| | | Hordeum vulgare | | | |
| | | | SEQ ID NO. 2028 | | |
| | | | AAC39481.1 | AF047694 | Vernicia fordii |
| | | | CAA89699.1 | Z49699 | Ricinus communis |
| | | Lycopersicon esculentum | AAB92658.1 | AF037988 | Fritillaria agrestis |
| | | Pinus sylvestris | AAB92657.1 | AF037987 | Fritillaria agrestis |
| | | Alonsoa meridionalis | AAB92656.1 | AF037986 | Fritillaria agrestis |
| | | Pisum sativum | AAB92655.1 | AF037985 | Fritillaria agrestis |
| | | Pinus sylvestris | AAB92654.1 | AF037984 | Fritillaria agrestis |
| | | Lycopersicon esculentum | AAB92419.1 | AF037455 | Fritillaria agrestis |
| | | Lycopersicon esculentum | BAA20071.1 | D86744 | Oryza sativa |
| | | Petunia x hybrida | CAA54397.1 | X77150 | Oryza sativa |
| | | Pisum sativum | | | |
| | | Oryza sativa | SEQ ID NO. 2032 | | |
| | | Hordeum vulgare | CAA72271.1 | Y11483 | Brassica napus |
| | | Nicotiana tabacum | CAA72270.1 | Y11482 | Brassica napus |
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| AAB72097.1 | AF021257 | Hordeum vulgare | BAA33062.1 | AB017273 | Cuscuta japonica |
| AAB72096.1 | AF021256 | Hordeum vulgare | AAA33671.1 | M33900 | Pisum sativum |
| SEQ ID NO. 2033 | | | BAA02160.1 | D12635 | Oryza sativa |
| AAA34181.1 | M98466 | Lycopersicon esculentum | CAB08441.1 | Z95153 | Helianthus annuus |
| AAB39547.1 | U63374 | Lycopersicon esculentum | CAA42222.1 | X59701 | Helianthus annuus |
| AAB38497.1 | U79772 | Mercurialis annua | CAA08908.1 | AJ009880 | Castanea sativa |
| SEQ ID NO. 2034 | | | CAA63901.1 | X94191 | Pennisetum glaucum |
| AAD15628.1 | AF021807 | Corylus avellana | AAC78394.1 | U83671 | Oryza sativa |
| AAF34133.1 | AF161179 | Malus x domestica | CAA46641.1 | X65725 | Zea mays |
| CAA41546.1 | X58710 | Medicago sativa | AAD09181.1 | AF089842 | Funaria hygrometrica |
| CAA41547.1 | X58711 | Medicago sativa | AAC01560.1 | AF007762 | Agrostis stolonifera var. |
| AAA33672.1 | M33899 | Pisum sativum | palustris | | |
| AAB03893.1 | M11318 | Glycine max | SEQ ID NO. 2036 | | |
| AAB63310.1 | U46544 | Helianthus annuus | CAA05276.1 | AJ002236 | Lycopersicon pimpinellifolium |
| AAD30454.1 | AF123257 | Lycopersicon esculentum | AAC78591.1 | AF053993 | Lycopersicon esculentum |
| AAD30452.1 | AF123255 | Lycopersicon esculentum | AAC78596.1 | AF053998 | Lycopersicon esculentum |
| AAB63311.1 | U46545 | Helianthus annuus | CAA05279.1 | AJ002237 | Lycopersicon esculentum |
| AAD30453.1 | AF123256 | Lycopersicon esculentum | AAC78593.1 | AF053995 | Lycopersicon esculentum |
| CAA63570.1 | X92983 | Pseudotsuga menziesii | AAA65235.1 | U15936 | Lycopersicon pimpinellifolium |
| CAA63903.1 | X94193 | Pennisetum glaucum | CAA05274.1 | AJ002236 | Lycopersicon pimpinellifolium |
| CAA25578.1 | X01104 | Glycine max | AAC78592.1 | AF053994 | Lycopersicon esculentum |
| CAA39603.1 | X56138 | Lycopersicon esculentum | AAC78595.1 | AF053997 | Lycopersicon esculentum |
| CAA63571.1 | X92984 | Pseudotsuga menziesii | AAC78594.1 | AF053996 | Lycopersicon pimpinellifolium |
| AAA61632.1 | U08601 | Papaver somniferum | BAA96776.1 | AF002521 | Oryza sativa |
| CAB36910.1 | AJ000691 | Quercus suber | BAB08215.1 | AP002539 | Oryza sativa |
| CAB55634.2 | AJ237596 | Helianthus annuus | CAA05268.1 | AJ002235 | Lycopersicon hirsutum |
| AAA33910.1 | M80939 | Oryza sativa | AAD50430.1 | AF166121 | Hordeum vulgare |
| CAA37848.1 | X53852 | Daucus carota | CAB55409.1 | AL117265 | Oryza sativa |
| CAA37864.1 | X53870 | Chenopodium rubrum | AAC49123.1 | U37133 | Oryza sativa |
| AAA33975.1 | M11395 | Glycine max | AAC80225.1 | U72723 | Oryza longistaminata |
| AAB39856.1 | U81385 | Oryza sativa | SEQ ID NO. 2038 | | |
| AAA33909.1 | M80938 | Oryza sativa | AAD00708.1 | U91857 | Stylosanthes hamata |
| CAA43210.1 | X60820 | Oryza sativa | BAA97123.1 | AB016265 | Nicotiana sylvestris |
| CAA37847.1 | X53851 | Daucus carota | BAB03248.1 | AB037183 | Oryza sativa |
| CAA63902.1 | X94192 | Pennisetum glaucum | BAA76734.1 | AB024575 | Nicotiana tabacum |
| AAA33974.1 | M11317 | Glycine max | BAA97122.1 | AB016264 | Nicotiana sylvestris |
| AAC78392.1 | U83669 | Oryza sativa | CAB96900.1 | AJ251250 | Catharanthus roseus |
| AAC39360.1 | U63631 | Fragaria x ananassa | CAB96899.1 | AJ251249 | Catharanthus roseus |
| AAB72109.1 | AF022217 | Brassica rapa | AAC49740.1 | U89256 | Lycopersicon esculentum |

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| AAC49741.1 | U89257 | Lycopersicon esculentum | AAA34173.1 | M60166 | Lycopersicon esculentum |
| BAA07321.1 | D38123 | Nicotiana tabacum | AAA34094.1 | M80489 | Nicotiana plumbaginifolia |
| AAC50047.1 | U89255 | Lycopersicon esculentum | AAA34052.1 | M27888 | Nicotiana plumbaginifolia |
| AAF05606.1 | AF190770 | Oryza sativa | CAC28221.1 | AJ286746 | Sesbania rostrata |
| AAC29516.1 | U77655 | Solanum tuberosum | CAA54045.1 | X76535 | Solanum tuberosum |
| BAA97124.1 | AB016266 | Nicotiana sylvestris | BAA06629.1 | D31843 | Oryza sativa |
| AAC62619.1 | AF057373 | Nicotiana tabacum | CAA64406.1 | X94936 | Phaseolus vulgaris |
| BAA87068.1 | AB035270 | Matricaria chamomilla | AAF98344.1 | AF275745 | Lycopersicon esculentum |
| AAB38748.1 | U81157 | Nicotiana tabacum | AAD55399.1 | AF179442 | Lycopersicon esculentum |
| AAD45623.1 | AF084185 | Brassica napus | CAA54046.1 | X76536 | Solanum tuberosum |
| SEQ ID NO. 2040 | | | SEQ ID NO. 2046 | | |
| BAA90610.1 | AP001129 | Oryza sativa | AAAG9541.1 | U18557 | Raphanus sativus |
| CAA43454.1 | X61146 | Nicotiana tabacum | CAA65983.1 | X97318 | Raphanus sativus |
| SEQ ID NO. 2043 | | | AAAG9540.1 | U18556 | Raphanus sativus |
| CAA04670.1 | AJ001310 | Solanum tuberosum | AAB03224.1 | U59459 | Brassica napus |
| | | | CAA65984.1 | X97319 | Raphanus sativus |
| SEQ ID NO. 2045 | | | SEQ ID NO. 2048 | | |
| BAA89544.1 | AP001072 | Oryza sativa | BAA85400.1 | AP000615 | Oryza sativa |
| BAA88191.1 | AP000836 | Oryza sativa | CAB06083.1 | Z83834 | Hordeum vulgare |
| BAA90510.2 | AP001111 | Oryza sativa | CAA74909.1 | Y14573 | Hordeum vulgare |
| AAD11618.1 | AF050496 | Lycopersicon esculentum | CAA06487.1 | AJ005341 | Linum usitatissimum |
| AAA34138.1 | M96324 | Lycopersicon esculentum | | | |
| AAD11617.1 | AF050495 | Lycopersicon esculentum | SEQ ID NO. 2049 | | |
| AAF73985.1 | AF096871 | Zea mays | AAC63113.1 | AF000307 | Brassica napus |
| AAD31896.1 | AF145478 | Mesembryanthemum crystallinum | AAC63112.1 | AF000306 | Brassica napus |
| AAAG28436.1 | AF195029 | Glycine max | AAC63111.1 | AF000305 | Brassica napus |
| CAA63790.1 | X93592 | Dunaliella bioculata | AAA61638.1 | U10275 | Flaveria bidentis |
| AAG28435.1 | AF195028 | Glycine max | AAA33342.2 | M84135 | Flaveria chloraefolia |
| CAA68234.1 | X99972 | Brassica oleracea | AAA87399.1 | U10277 | Flaveria bidentis |
| AAB58910.1 | U82966 | Oryza sativa | AAA33343.1 | M84136 | Flaveria chloraefolia |
| CAB69824.1 | AJ271439 | Prunus persica | | | |
| AAB60276.1 | U09989 | Zea mays | SEQ ID NO. 2050 | | |
| BAA01058.1 | D10207 | Oryza sativa | AAD22970.1 | AF124148 | Glycine max |
| CAC29435.1 | AJ310523 | Vicia faba | CAB50901.1 | AJ238651 | Medicago truncatula |
| AAD20330.1 | AF110268 | Oryza sativa | | | |
| AAA34098.1 | M80490 | Nicotiana plumbaginifolia | SEQ ID NO. 2051 | | |
| AAB84203.1 | AF029257 | Kosteletzkya virginica | AAC04671.1 | AF018174 | Brassica napus |
| CAC28224.1 | AJ286749 | Sesbania rostrata | AAC49357.1 | U35830 | Pisum sativum |
| AAD46188.1 | AF156691 | Nicotiana plumbaginifolia | CAA45098.1 | X63537 | Pisum sativum |

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| AAC19392.1 | AF069314 | Mesembryanthemum crystallinum | AAE74565.1 | AF215851 | Spinacia oleracea |
| CAA33082.1 | X14959 | Spinacia oleracea | AAE74566.1 | AF215852 | Nicotiana tabacum |
| AAC32111.1 | AF051206 | Picea mariana | AAE74568.1 | AF215854 | Zea mays |
| BAB20886.1 | AB053294 | Oryza sativa | | | |
| CAA77847.1 | Z11803 | Nicotiana tabacum | SEQ ID NO. 2066 | | |
| CAA05081.1 | AJ001903 | Triticum turgidum subsp. durum | CAA59049.1 | X84308 | Hordeum vulgare |
| AAB53695.1 | U59380 | Brassica napus | | | |
| BAA13524.1 | D87984 | Fagopyrum esculentum | SEQ ID NO. 2067 | | |
| CAA94534.1 | Z70677 | Ricinus communis | AAE75824.1 | AF101788 | Pinus taeda |
| CAA56850.1 | X80887 | Chlamydomonas reinhardtii | AAC32448.1 | U76296 | Spinacia oleracea |
| CAA55399.1 | X78822 | Chlamydomonas reinhardtii | AAE66243.1 | AF243181 | Lycopersicon esculentum |
| AAB51522.1 | U92541 | Oryza sativa | BAA90481.1 | AB035146 | Ipomoea nil |
| BAA05546.1 | D26547 | Oryza sativa | | | |
| AAF88067.1 | AF286593 | Triticum aestivum | SEQ ID NO. 2068 | | |
| CAA41415.1 | X58527 | Nicotiana tabacum | AAC34983.1 | AF039598 | Prunus persica |
| BAA04864.1 | D21836 | Oryza sativa | CAA38025.1 | X54090 | Gossypium hirsutum |
| BAA25681.1 | AB010434 | Brassica rapa | AAD48017.1 | AF165529 | Rumex palustris |
| AAC35777.1 | AF273844 | Brassica oleracea var. | CAA41188.1 | X58230 | Nicotiana tabacum |
| alboglabra | | | CMA74179.1 | Y13865 | Beta vulgaris |
| AAB53694.1 | U59379 | Brassica napus | CAA28639.1 | X04966 | Petunia x hybrida |
| AAD49232.1 | AF159387 | Lolium perenne | CAA52750.1 | X74732 | Amaranthus hypochondriacus |
| AAD49230.1 | AF159385 | Hordeum bulbosum | CAA84525.1 | Z35160 | Solanum tuberosum |
| AAD49231.1 | AF159386 | Secale cereale | CAA43907.1 | X61915 | Pinus thunbergii |
| AAD49233.1 | AF159388 | Phalaris coerulescens | AAA34141.1 | M17558 | Lycopersicon esculentum |
| AAD49234.1 | AF159389 | Phalaris coerulescens | AAA33392.1 | M12152 | Lemna gibba |
| AAD56954.1 | AF186240 | Secale cereale | AAF89205.1 | AF279248 | Vigna radiata |
| BAB39913.1 | AP002912 | Oryza sativa | CAA40365.1 | X57082 | Pisum sativum |
| CAA55398.1 | X78821 | Chlamydomonas reinhardtii | AAC15992.1 | AF061577 | Oryza sativa |
| CAA56851.1 | X80888 | Chlamydomonas reinhardtii | BAA00537.1 | D00642 | Oryza sativa |
| CAA44209.1 | X62335 | Chlamydomonas reinhardtii | AAB19040.1 | U51632 | Pinus palustris |
| CAA06735.1 | AJ005840 | Triticum aestivum | CAA31773.1 | X13407 | Pinus thunbergii |
| AAD45358.1 | AF160870 | Brassica napus | AAA34142.1 | M17559 | Lycopersicon esculentum |
| AAB52409.1 | U76831 | Brassica napus | CAA89823.1 | Z49749 | Pseudotsuga menziesii |
| CAA35826.1 | X51462 | Spinacia oleracea | AAB82142.1 | AF022739 | Oryza sativa |
| CAA53900.1 | X76269 | Pisum sativum | AAA60965.1 | L23107 | Ginkgo biloba |
| AAC49358.1 | U35831 | Pisum sativum | CAA48641.1 | X68682 | Zea mays |
| CAA35827.1 | X51463 | Spinacia oleracea | AAA80591.1 | U21111 | Solanum tuberosum |
| CAA06736.1 | AJ005841 | Oryza sativa | AAA34147.1 | M14443 | Lycopersicon esculentum |
| | | | AAA80593.1 | U21113 | Solanum tuberosum |
| | | | AAA80589.1 | U20983 | Solanum tuberosum |
| | | | BAA25391.1 | AB012637 | Nicotiana sylvestris |
| | | Solanum tuberosum | | | |
| SEQ ID NO. 2054 | | | | | |
| AAF74567.1 | AF215853 | | | | |

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| BAA25396.1 | AB012641 | Nicotiana sylvestris | CAA43907.1 | X61915 | Pinus thunbergii |
| BAA25394.1 | AB012639 | Nicotiana sylvestris | AAD48017.1 | AF165529 | Rumex palustris |
| AAA80594.1 | U21114 | Solanum tuberosum | AAC15992.1 | AF061577 | Oryza sativa |
| BAA25389.1 | AB012637 | Nicotiana sylvestris | CAA39883.1 | X56538 | Pisum sativum |
| BAA25392.1 | AB012638 | Nicotiana sylvestris | AAA50172.1 | U01964 | Glycine max |
| AAA68425.1 | M34396 | Polystichum munitum | CAA32526.1 | X14341 | Plastid Spinacia oleracea |
| CAA57409.1 | X81810 | Picea abies | AAA34142.1 | M17559 | Lycopersicon esculentum |
| AAA50172.1 | U01964 | Glycine max | CAA10284.1 | AJ131044 | Cicer arietinum |
| AAA80592.1 | U21112 | Solanum tuberosum | AAC25775.1 | AF072931 | Medicago sativa |
| BAA25395.1 | AB012640 | Nicotiana sylvestris | AAF26741.1 | AF220527 | Euphorbia esula |
| BAA25388.1 | AB012636 | Nicotiana sylvestris | AAA33396.1 | M29334 | Lemna gibba |
| CAA41187.1 | X58229 | Nicotiana tabacum | BAA25393.1 | AB012638 | Nicotiana sylvestris |
| BAA25390.1 | AB012637 | Nicotiana sylvestris | AAB61238.1 | AF003129 | Mesembryanthemum crystallinum |
| CAA32900.1 | X14794 | Zea mays | BAA25395.1 | AB012640 | Nicotiana sylvestris |
| AAA34148.1 | M14444 | Lycopersicon esculentum | AAA80589.1 | U20983 | Solanum tuberosum |
| CAA57408.1 | X81809 | Picea abies | AAA33124.1 | M16057 | Cucumis sativus |
| BAA25393.1 | AB012638 | Nicotiana sylvestris | CAA31419.1 | X12981 | Glycine max |
| BAA77273.1 | AB026686 | Physcomitrella patens | AAA80591.1 | U21111 | Solanum tuberosum |
| CAA47950.1 | X67714 | Pinus contorta | AAA80593.1 | U21113 | Solanum tuberosum |
| SEQ ID NO. 2069 | | | AAB61237.1 | AF003128 | Mesembryanthemum crystallinum |
| AAD27877.1 | AF139465 | Vigna radiata | CAA41187.1 | X58229 | Nicotiana tabacum |
| CAA49149.1 | X69215 | Pisum sativum | BAA24493.1 | AB006081 | Fagus crenata |
| AAF20948.1 | AF207690 | Daucus carota | AAA34148.1 | M14444 | Lycopersicon esculentum |
| CAA43803.1 | X61609 | Brassica napus | AAA60965.1 | I23107 | Ginkgo biloba |
| CAA43804.1 | X61610 | Brassica napus | AAA34147.1 | M14443 | Lycopersicon esculentum |
| CAA43802.1 | X61608 | Brassica napus | SEQ ID NO. 2070 | | |
| AAA33392.1 | M12152 | Lemna gibba | AAB86942.1 | AF031241 | Glycine max |
| CAA52750.1 | X74732 | Amaranthus hypochondriacus | AAK21920.1 | AF338252 | Glycine max |
| CAA41188.1 | X58230 | Nicotiana tabacum | CAA42660.1 | X60058 | Nicotiana tabacum |
| CAA28639.1 | X04966 | Petunia x hybrida | CAA42659.1 | X60057 | Nicotiana tabacum |
| AAC34983.1 | AF039598 | Prunus persica | AAC49900.1 | U58209 | Zea mays |
| CAA74179.1 | Y13865 | Beta vulgaris | AAC49899.1 | U58208 | Zea mays |
| AAA34141.1 | M17558 | Lycopersicon esculentum | AAB63469.1 | AF006825 | Oryza sativa |
| CAA89823.1 | Z49749 | Pseudotsuga menziesii | CAA89834.2 | Z49764 | Pseudotsuga menziesii |
| CAA38025.1 | X54090 | Gossypium hirsutum | AAA92743.1 | M59449 | Zea mays |
| AAAB19040.1 | U51632 | Pinus palustris | SEQ ID NO. 2071 | | |
| CAA84525.1 | Z35160 | Solanum tuberosum | CAA32764.1 | X14609 | Cucumis sativus |
| CAA32900.1 | X14794 | Zea mays | CAA41434.1 | X58542 | Cucumis sativus |
| CAA40365.1 | X57082 | Pisum sativum | BAA08410.1 | D49432 | Cucurbita sp. |
| BAA00537.1 | D00642 | Oryza sativa | | | |

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| BAA08411.1 | D49433 | Cucurbita sp. | BAA89008.1 | AB027454 | Petunia x hybrida |
| AAB00105.1 | U01067 | Cucurbita pepo | CAA54609.1 | X77459 | Manihot esculenta |
| SEQ ID NO. 2072 | | | BAA36421.1 | AB013596 | Perilla frutescens |
| BAA09852.1 | D63781 | Glycine max | AAD55985.1 | AF165148 | Petunia x hybrida |
| CAA55293.1 | X78547 | Glycine max | CAA54613.1 | X77463 | Manihot esculenta |
| CAA55294.1 | X78548 | Glycine max | BAA12737.1 | D85186 | Gentiana triflora |
| AAA81890.1 | U02495 | Solanum tuberosum | CAA54558.1 | X77369 | Solanum melongena |
| AAA81892.1 | U02497 | Solanum tuberosum | BAA36411.1 | AB012115 | Vigna mungo |
| AAA81889.1 | U02494 | Solanum tuberosum | CAB81057.1 | Z25802 | Petunia x hybrida |
| AAA81891.1 | U02496 | Solanum tuberosum | AAD21086.1 | AF127218 | Forsythia x intermedia |
| AAA81893.1 | U02498 | Solanum tuberosum | CAB50376.1 | X71059 | Petunia x hybrida |
| BAA85201.1 | AP000570 | Oryza sativa | CAB50377.1 | X71060 | Petunia x hybrida |
| BAA84626.1 | AP000492 | Oryza sativa | SEQ ID NO. 2077 | | |
| BAA85202.1 | AP000570 | Oryza sativa | AAK28303.1 | AF346431 | Nicotiana tabacum |
| BAA84627.1 | AP000492 | Oryza sativa | AAB36653.1 | U32644 | Nicotiana tabacum |
| AAB02006.1 | U57350 | Nicotiana tabacum | AAB36652.1 | U32643 | Nicotiana tabacum |
| SEQ ID NO. 2076 | | | AAK28304.1 | AF346432 | Nicotiana tabacum |
| AAB36652.1 | U32643 | Nicotiana tabacum | CAB59450.1 | X85138 | Lycopersicon esculentum |
| AAK28304.1 | AF346432 | Nicotiana tabacum | CAB56231.1 | Y18871 | Dortheanthus bellidifformis |
| AAK28303.1 | AF346431 | Nicotiana tabacum | BAB83484.1 | AB031274 | Scutellaria baicalensis |
| AAB36653.1 | U32644 | Nicotiana tabacum | AAB48444.1 | U82367 | Solanum tuberosum |
| CAB56231.1 | Y18871 | Dortheanthus bellidifformis | BAA36410.1 | AB012114 | Vigna mungo |
| CAB59450.1 | X85138 | Lycopersicon esculentum | CAB54610.1 | X77460 | Manihot esculenta |
| BAA83484.1 | AB031274 | Scutellaria baicalensis | AAD51778.1 | AF116858 | Phaseolus vulgaris |
| AAB48444.1 | U82367 | Solanum tuberosum | AAD04166.1 | AF101972 | Phaseolus lunatus |
| BAA36410.1 | AB012114 | Vigna mungo | BAA89009.1 | AB027455 | Petunia x hybrida |
| CAB54610.1 | X77460 | Manihot esculenta | AAB62270.1 | AF006081 | Solanum berthaultii |
| AAD04166.1 | AF101972 | Phaseolus lunatus | AAF61647.1 | AF190634 | Nicotiana tabacum |
| BAA89009.1 | AB027455 | Petunia x hybrida | CAA54612.1 | X77462 | Manihot esculenta |
| AAD51778.1 | AF116858 | Phaseolus vulgaris | BAA36412.1 | AB012116 | Vigna mungo |
| AAF61647.1 | AF190634 | Nicotiana tabacum | AAF98390.1 | AF287143 | Brassica napus |
| BAA93039.1 | AB033758 | Citrus unshiu | BAA36423.1 | AB013598 | Verbena x hybrida |
| BAA36412.1 | AB012116 | Vigna mungo | AAF17077.1 | AF199453 | Sorghum bicolor |
| BAA36423.1 | AB013598 | Verbena x hybrida | BAA93039.1 | AB033758 | Citrus unshiu |
| AAF17077.1 | AF199453 | Sorghum bicolor | BAA89008.1 | AB027454 | Petunia x hybrida |
| CAB54611.1 | X77461 | Manihot esculenta | CAA54558.1 | X77369 | Solanum melongena |
| CAB54612.1 | X77462 | Manihot esculenta | CAB54611.1 | X77461 | Manihot esculenta |
| AAF98390.1 | AF287143 | Brassica napus | CAB54609.1 | X77459 | Manihot esculenta |
| BAA19155.1 | AB000623 | Nicotiana tabacum | BAA12737.1 | D85186 | Gentiana triflora |
| | | | AAD21086.1 | AF127218 | Forsythia x intermedia |

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| BAA36411.1 | AB012115 | Vigna mungo | CAA71489.1 | Y10463 | Spinacia oleracea |
| BAA19155.1 | AB000623 | Nicotiana tabacum | BAA01950.1 | D11337 | Vigna angularis |
| AAD55985.1 | AF165148 | Petunia x hybrida | BAA11853.1 | D83225 | Populus nigra |
| CAA54613.1 | X77463 | Manihot esculenta | CAA71491.1 | Y10465 | Spinacia oleracea |
| BAA36421.1 | AB013596 | Perilla frutescens | AAE63024.1 | AF244921 | Spinacia oleracea |
| BAA19659.1 | AB002818 | Perilla frutescens | AAD37429.2 | AF149279 | Phaseolus vulgaris |
| AAB81683.1 | AF000372 | Vitis vinifera | BAA92500.1 | AP001383 | Oryza sativa |
| BAB41025.1 | AB047098 | Vitis vinifera | BAA92967.1 | AP001551 | Oryza sativa |
| BAB41023.1 | AB047096 | Vitis vinifera | AAE63027.1 | AF244924 | Spinacia oleracea |
| SEQ ID NO. 2078 | | | CAC21391.1 | AJ401274 | Zea mays |
| AAA53140.1 | U08469 | Glycine max | AAB06183.1 | M37636 | Arachis hypogaea |
| AAA19157.1 | U07745 | Lycopersicon esculentum | CAB92952.1 | AJ251254 | Pinus pinaster |
| AAF80468.1 | AF163149 | Glycine max | AAA34050.1 | M74103 | Nicotiana sylvestris |
| AAC02267.1 | AF007100 | Glycine max | BAA96643.1 | AP002482 | Oryza sativa |
| AAC23573.1 | AF068249 | Glycine max | CAC21393.1 | AJ401276 | Zea mays |
| AAF80469.1 | AF163150 | Glycine max | CAA71494.1 | Y10468 | Spinacia oleracea |
| AAC41659.1 | L38260 | Nicotiana tabacum | AAD43561.1 | AF155124 | Gossypium hirsutum |
| AAA85742.1 | U34393 | Glycine max | CAA76374.2 | Y16776 | Spinacia oleracea |
| AAC39330.1 | AF029895 | Triticum aestivum | AAB02926.1 | U59284 | Linum usitatissimum |
| AAA80214.1 | U19183 | Zea mays | AAA98491.1 | L36981 | Petroselinum crispum |
| CAC19876.1 | AJ131866 | Brassica napus | AAB48184.1 | L24120 | Linum usitatissimum |
| AAAB42144.1 | L25042 | Medicago sativa | BAA94962.1 | AB042103 | Asparagus officinalis |
| CAC19875.1 | AJ131865 | Brassica napus | AAF63025.1 | AF244922 | Spinacia oleracea |
| AAC49275.1 | U39321 | Triticum aestivum | AAD11482.1 | U51192 | Glycine max |
| CAA54683.1 | X77576 | Brassica napus | CAA66036.1 | X97350 | Populus balsamifera subsp. |
| AAA19970.1 | U10187 | Triticum aestivum | trichocarpa | | |
| AAC39332.1 | AF029897 | Triticum aestivum | BAA14144.1 | D90116 | Armoracia rusticana |
| AAC39331.1 | AF029896 | Triticum aestivum | AAC05277.1 | AF049881 | Linum usitatissimum |
| AAA81578.1 | L48995 | Glycine max | AAD11481.1 | U51191 | Glycine max |
| CAA71346.1 | Y10301 | Brassica napus | BAA07663.1 | D42064 | Nicotiana tabacum |
| AAA53141.1 | U08846 | Glycine max | CAA71490.1 | Y10464 | Spinacia oleracea |
| CAC16140.1 | X77374 | Brassica napus | BAA77387.1 | AB024437 | Scutellaria baicalensis |
| CAA71347.1 | Y10302 | Brassica napus | CAA80502.1 | Z22920 | Spirodela polyrrhiza |
| AAC41658.1 | L39267 | Ricinus communis | BAA82306.1 | AB027752 | Nicotiana tabacum |
| SEQ ID NO. 2079 | | | AAF63026.1 | AF244923 | Spinacia oleracea |
| AAB67737.1 | L77080 | Stylosanthes humilis | AAD37376.1 | AF145350 | Glycine max |
| AAA32676.1 | M37637 | Arachis hypogaea | AAA65636.1 | L13653 | Lycopersicon esculentum |
| CAA64413.1 | X94943 | Lycopersicon esculentum | CAA40796.1 | X57564 | Armoracia rusticana |
| CAA59487.1 | X85230 | Triticum aestivum | BAA07664.1 | D42065 | Nicotiana tabacum |
| | | | AAB02554.1 | L37790 | Stylosanthes humilis |

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| AAB53100.1 | U68218 | Brassica napus | BAA77282.1 | AB026731 | Oryza sativa |
| AAB94542.1 | AF016305 | Zea mays | AAC26053.1 | AF074940 | Glycine max |
| BAA36274.1 | AB015204 | Oryza sativa | AAB70837.1 | AF019907 | Vitis vinifera |
| AAF18998.1 | AF212154 | Allium cepa | BAA07108.1 | D37870 | Spinacia oleracea |
| AAB01234.1 | U57088 | Chlamydomonas reinhardtii | AAB30526.1 | S70187 | Glycine max |
| SEQ ID NO. 2085 | | | AAD53185.1 | AF181096 | Vigna unguiculata |
| AAG01147.1 | AF283816 | Pinus taeda | AAD28177.1 | AF109694 | Brassica juncea |
| CAA95999.1 | Z71395 | Nicotiana plumbaginifolia | BAA36283.1 | D85751 | Oryza sativa |
| AAB71420.1 | U74631 | Ricinus communis | BAA37092.1 | AB009592 | Oryza sativa |
| AAB71419.1 | U74630 | Ricinus communis | AAK27157.1 | AF349449 | Brassica juncea |
| AAD32207.1 | AF134733 | Prunus armeniaca | CAA53925.1 | X76293 | Nicotiana tabacum |
| CAA05161.1 | AJ002057 | Beta vulgaris | CAA54043.1 | X76533 | Nicotiana tabacum |
| AAA32948.1 | I27348 | Hordeum vulgare | CAA53993.1 | X76455 | Nicotiana tabacum |
| AAA32949.1 | I27349 | Hordeum vulgare | AAF26175.1 | AF105199 | Glycine max |
| AAF01470.1 | AF190454 | Zea mays | CAB66332.1 | AJ279690 | Betula pendula |
| CAA86728.1 | Z46772 | Zea mays | CAC13956.1 | AJ400816 | Mesembryanthemum crystallinum |
| CAA61939.1 | X89813 | Zea mays | CAA06835.1 | AJ006055 | Zea mays |
| AAD17490.1 | AF052040 | Berberis stolonifera | CAA42921.1 | X60373 | Pisum sativum |
| AAB70919.1 | AF019376 | Brassica napus | CAA62482.1 | X90996 | Pisum sativum |
| CAAS4975.1 | X78057 | Zea mays | AAA33962.1 | L11632 | Glycine max |
| CAB54526.1 | AJ000765 | Chlamydomonas reinhardtii | CAA66924.1 | X98274 | Pisum sativum |
| BAA85118.1 | AB018243 | Solanum melongena | SEQ ID NO. 2088 | | |
| AAK15502.1 | AF325720 | Pennisetum ciliare | AAC72193.1 | AF069909 | Zea mays |
| CAAS7914.1 | X82578 | Parthenium argentatum | AAC72192.1 | AF069908 | Zea mays |
| BAA77025.1 | AB026251 | Lithospermum erythrorhizon | AAC72194.1 | AF069910 | Zea mays |
| SEQ ID NO. 2086 | | | AAB01223.1 | U56697 | Pisum sativum |
| AAK07610.1 | AF319771 | Brassica napus | AAC32149.1 | AF051249 | Picea mariana |
| AAF68384.1 | AF236368 | Zea mays | AAF43837.1 | AF166114 | Chloroplast Mesostigma viride |
| AAF68387.1 | AF236371 | Zea mays | AAD22077.1 | AF124755 | Pinus banksiana |
| AAC49690.1 | U69154 | Nicotiana tabacum | CAA75778.1 | Y15782 | Capsicum annuum |
| AAF68385.1 | AF236369 | Zea mays | AAB88295.1 | AF024512 | Oryza sativa |
| AAF68386.1 | AF236370 | Zea mays | SEQ ID NO. 2089 | | |
| SEQ ID NO. 2087 | | | CAC17753.1 | AJ294543 | Dendrobium 'Sonia' |
| AAD28178.1 | AF109695 | Brassica juncea | CAC17752.1 | AJ294542 | Dendrobium 'Sonia' |
| BAA05408.1 | D26392 | Cucumis sativus | CAA77151.1 | Y18377 | Zea mays |
| AAC41654.1 | I41345 | Lycopersicon esculentum | AAC27500.1 | AF044603 | Zea mays |
| AAA60979.1 | U06461 | Pisum sativum | BAB03420.1 | AP002816 | Oryza sativa |
| BAA77214.1 | D85764 | Oryza sativa | SEQ ID NO. 2090 | | |

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| CAA82993.1 | Z30332 | Spinacia oleracea | AAG34822.1 | AF244679 | Zea mays |
| CAA82994.1 | Z30333 | Mesembryanthemum crystallinum | CAA05355.1 | AJ002381 | Oryza sativa |
| SEQ ID NO. 2094 | | | SEQ ID NO. 2098 | | |
| AAC49181.1 | U39289 | Brassica napus | BAA84780.1 | AB018444 | Oryza sativa |
| AAC49182.1 | U39319 | Brassica napus | BAA84779.1 | AB018443 | Oryza sativa |
| SEQ ID NO. 2095 | | | SEQ ID NO. 2099 | | |
| CAA55039.1 | X78203 | Hyoscyamus muticus | CAA47926.1 | X67696 | Cucumis sativus |
| AAB5163.1 | AF002692 | Solanum commersonii | BAA1117.1 | D70895 | Cucurbita sp. |
| BAA01394.1 | D10524 | Nicotiana tabacum | CAA63598.1 | X93015 | Brassica napus |
| CAA96431.1 | Z71749 | Nicotiana plumbaginifolia | CAA53078.1 | X75329 | Mangifera indica |
| AAA33931.1 | M84969 | Silene vulgaris | CAA55006.1 | X78116 | Raphanus sativus |
| AAA33930.1 | M84968 | Silene vulgaris | AAD44539.1 | AF113522 | Zea mays |
| AAF61392.1 | AF133894 | Persea americana | | | |
| CAB38119.1 | AJ010296 | Zea mays | SEQ ID NO. 2101 | | |
| CAB38118.1 | AJ010295 | Zea mays | AAF67753.1 | AF255651 | Brassica rapa subsp. pekinensis |
| AAG34811.1 | AF243376 | Glycine max | AAC49980.2 | AF008441 | Brassica rapa |
| ARG34812.1 | AF243377 | Glycine max | CAA66924.1 | X98274 | Pisum sativum |
| ARG34814.1 | AF243379 | Glycine max | BAA36283.1 | D85751 | Oryza sativa |
| CAA09190.1 | AJ010451 | Alopecurus myosuroides | BAA37092.1 | AB009592 | Oryza sativa |
| CAA09193.1 | AJ010454 | Alopecurus myosuroides | BAA07108.1 | D37870 | Spinacia oleracea |
| CAA09191.1 | AJ010452 | Alopecurus myosuroides | CAC13956.1 | AJ400816 | Mesembryanthemum crystallinum |
| CAA09192.1 | AJ010453 | Alopecurus myosuroides | CAB66332.1 | AJ279690 | Betula pendula |
| AAD56395.1 | AF184059 | Triticum aestivum | CAA53925.1 | X76293 | Nicotiana tabacum |
| CAA39487.1 | X56012 | Triticum aestivum | CAA42921.1 | X60373 | Pisum sativum |
| AAA33470.1 | Y07721 | Petunia x hybrida | AAK27157.1 | AF349449 | Brassica juncea |
| AAA33469.1 | M16901 | Zea mays | AAD28177.1 | AF109694 | Brassica juncea |
| AAA20585.1 | M16902 | Zea mays | CAA62482.1 | X90996 | Pisum sativum |
| CAA56047.1 | U12679 | Zea mays | AAF26175.1 | AF105199 | Glycine max |
| CAB66333.1 | X79515 | Zea mays | AAB70837.1 | AF019907 | Vitis vinifera |
| AAC64007.1 | AJ279691 | Betula pendula | AAA33962.1 | L11632 | Glycine max |
| CAA39480.1 | AF062403 | Oryza sativa | CAA54043.1 | X76533 | Nicotiana tabacum |
| AAG34823.1 | X56004 | Triticum aestivum | CAA06835.1 | AJ006055 | Zea mays |
| AAG34818.1 | AF244680 | Zea mays | CAA53993.1 | X76455 | Nicotiana tabacum |
| AAG34820.1 | AF244675 | Zea mays | AAB30526.1 | S70187 | Glycine max |
| AAG34817.1 | AF244677 | Zea mays | AAC26053.1 | AF074940 | Glycine max |
| AAG34821.1 | AF244674 | Zea mays | AAD53185.1 | AF181096 | Vigna unguiculata |
| CAA05354.1 | AF244678 | Zea mays | AAA60979.1 | U06461 | Pisum sativum |
| AAG34816.1 | AJ002380 | Oryza sativa | BAA05408.1 | D26392 | Cucumis sativus |
| | | Zea mays | AAC41654.1 | L41345 | Lycopersicon esculentum |

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| AAD28178.1 | AF109695 | Brassica juncea | AAF78516.1 | AF195217 | Pyrus pyrifolia |
| BAA77214.1 | D85764 | Oryza sativa | SEQ ID NO. 2111 | | |
| SEQ ID NO. 2104 | | | BAA78575.1 | AB028132 | Oryza sativa |
| AAG22606.1 | AF258809 | Lycopersicon esculentum | BAA78572.1 | AB028129 | Oryza sativa |
| AAB41742.1 | U82559 | Lycopersicon esculentum | BAA78573.1 | AB028130 | Oryza sativa |
| AAG22605.1 | AF258808 | Lycopersicon esculentum | CAA66601.1 | X97942 | Nicotiana tabacum |
| AAG22607.1 | AF258810 | Lycopersicon esculentum | CAB89831.1 | AJ242853 | Solanum tuberosum |
| BAA23226.1 | D88451 | Zea mays | CAA08755.1 | AJ009594 | Nicotiana tabacum |
| AAG22608.1 | AF259793 | Lycopersicon esculentum | CAA66606.1 | X97947 | Nicotiana tabacum |
| AAB41741.1 | U82558 | Lycopersicon esculentum | CAA66604.1 | X97945 | Nicotiana tabacum |
| SEQ ID NO. 2106 | | | CAA66605.1 | X97946 | Nicotiana tabacum |
| AAA74957.1 | I31936 | Brassica rapa | BAA78574.1 | AB028131 | Oryza sativa |
| CAA99757.1 | Z75521 | Lycopersicon esculentum | BAA78576.1 | AB028133 | Oryza sativa |
| AAB46718.1 | U86018 | Oryza sativa | SEQ ID NO. 2113 | | |
| AAF78511.1 | AF195209 | Pyrus pyrifolia | CAA98179.1 | Z73951 | Lotus japonicus |
| SEQ ID NO. 2107 | | | BAA02904.1 | D13758 | Oryza sativa |
| CAA59409.1 | X85038 | Spinacia oleracea | SEQ ID NO. 2114 | | |
| AAD50464.1 | AF170026 | Chlamydomonas reinhardtii | BAA89009.1 | AB027455 | Petunia x hybrida |
| SEQ ID NO. 2108 | | | BAA36423.1 | AB013598 | Verbena x hybrida |
| CAA45701.1 | X64349 | Nicotiana tabacum | BAA36421.1 | AB013596 | Perilla frutescens |
| BAA96365.2 | AB043960 | Bruguiera gymnorhiza | BAA36422.1 | AB013597 | Perilla frutescens |
| CAA35601.1 | X17578 | Solanum tuberosum | BAA93039.1 | AB033758 | Citrus unshiu |
| CAA78043.1 | Z11999 | Lycopersicon esculentum | AAF61647.1 | AF190634 | Nicotiana tabacum |
| BAA02554.1 | D13297 | Pisum sativum | AAF98390.1 | AF287143 | Brassica napus |
| AAC04808.1 | AF037457 | Eritillaria agrestis | AAF17077.1 | AF199453 | Sorghum bicolor |
| CAA29062.1 | X05548 | Spinacia oleracea | BAA83484.1 | AB031274 | Scutellaria baicalensis |
| CAA04670.1 | X57408 | Triticum aestivum | AAD21086.1 | AF127218 | Forsythia x intermedia |
| AAD38521.1 | AF139818 | Brassica napus | BAA12737.1 | D85186 | Gentiana triflora |
| AAD55562.1 | AF110780 | Volvox carteri f. nagariensis | AAK28303.1 | AF346431 | Nicotiana tabacum |
| CAA36674.1 | X52427 | Lycopersicon esculentum | CAB56231.1 | Y18871 | Dorotheanthus bellidiformis |
| SEQ ID NO. 2109 | | | CAA54612.1 | X77462 | Manihot esculenta |
| CAA55090.1 | X78284 | Medicago sativa | BAB41019.1 | AB047092 | Vitis vinifera |
| CAC12883.1 | AJ295006 | Nicotiana tabacum | BAB41020.1 | AB047093 | Vitis vinifera |
| BAA92964.1 | AP001551 | Oryza sativa | AAAB36653.1 | U32644 | Nicotiana tabacum |
| AAB82139.1 | AF022736 | Oryza sativa | BAB41025.1 | AB047098 | Vitis vinifera |
| CAA64625.1 | X95313 | Chlamydomonas reinhardtii | BAB41023.1 | AB047096 | Vitis vinifera |
| | | | BAB41022.1 | AB047095 | Vitis vinifera |
| | | | BAB41021.1 | AB047094 | Vitis vinifera |

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|-----------------|----------|---------------------------------|-----------------|----------|----------------------------|
| BAA19659.1 | AB002818 | Perilla frutescens | CAC22329.1 | AJ298303 | Fagus sylvatica |
| BAB41026.1 | AB047099 | Vitis vinifera | AAB67852.1 | L76377 | Oryza sativa |
| BAB41024.1 | AB047097 | Vitis vinifera | CAB36911.1 | AJ000692 | Quercus suber |
| AAK28304.1 | AF346432 | Nicotiana tabacum | SEQ ID NO. 2120 | | |
| AAB36652.1 | U32643 | Nicotiana tabacum | AAB61593.1 | AF003125 | Mesembryanthemum crystalli |
| BAB41017.1 | AB047090 | Vitis labrusca x Vitis vinifera | AAA33665.1 | M31713 | Pisum sativum |
| BAA89008.1 | AB027454 | Petunia x hybrida | AAD02175.1 | AF039662 | Capsicum annuum |
| CAA59450.1 | X85138 | Lycopersicon esculentum | AAA34028.1 | M35660 | Spinacia oleracea |
| CAA54614.1 | X77464 | Manihot esculenta | CAA26281.1 | X02432 | Silene latifolia subsp. al |
| CAA54611.1 | X77461 | Manihot esculenta | CRA99756.1 | Z75520 | Lycopersicon esculentum |
| CAA54613.1 | X77463 | Manihot esculenta | AAA33459.1 | M73829 | Zea mays |
| SEQ ID NO. 2116 | | | AAA33460.1 | M73830 | Zea mays |
| AAD44809.1 | AF148648 | Nicotiana tabacum | CAA52980.1 | X75089 | Triticum aestivum |
| AAD44808.1 | AF147203 | Spinacia oleracea | BAA06436.1 | D30763 | Oryza sativa |
| SEQ ID NO. 2118 | | | AAA33462.1 | M73828 | Zea mays |
| AAD55090.1 | AF178653 | Vitis riparia | BAA32348.1 | AB016810 | Zea mays |
| CAA51432.1 | X72928 | Solanum commersonii | AAK15005.1 | AF233452 | Impatiens balsamina |
| CAA47601.1 | X67121 | Solanum commersonii | AAC49171.1 | U29516 | Chlamydomonas reinhardtii |
| CAC34055.1 | AJ297410 | Capsicum annuum | AAA33085.1 | L10349 | Chlamydomonas reinhardtii |
| CAA47047.1 | X66416 | Lycopersicon esculentum | CAA87068.1 | Z46944 | Citrus sinensis |
| AAB23375.1 | S44889 | Nicotiana tabacum | AAB65699.1 | AF010320 | Oryza sativa |
| AAB22459.2 | S40046 | Nicotiana tabacum | CAA73265.1 | Y12734 | Physcomitrella patens |
| AAG16625.1 | AY007309 | Solanum dulcamara | AAA33461.1 | M73831 | Zea mays |
| CAA46623.1 | X65701 | Nicotiana tabacum | BAA06456.1 | D30794 | Oryza sativa |
| CAA46622.1 | X65700 | Nicotiana tabacum | BAA90760.1 | AB038037 | Ipomoea nil |
| CAA51431.1 | X72927 | Nicotiana tabacum | BAA19865.1 | D83660 | Oryza sativa |
| CAA64620.1 | X95308 | Solanum commersonii | SEQ ID NO. 2121 | | |
| CAA51430.1 | X72926 | Nicotiana tabacum | AAD32141.1 | AF123503 | Nicotiana tabacum |
| AAC64171.1 | AF093743 | Lycopersicon esculentum | CAA42636.1 | X60033 | Glycine max |
| AAB61590.1 | AF003007 | Vitis vinifera | BAA96221.1 | AF002094 | Oryza sativa |
| BAA11180.1 | D76437 | Nicotiana sylvestris | SEQ ID NO. 2122 | | |
| AAA34087.1 | M64081 | Nicotiana tabacum | AAC63372.1 | AF093751 | Brassica oleracea |
| CAA47669.1 | X67244 | Solanum commersonii | AAB37228.1 | U22105 | Brassica napus |
| CRA71883.1 | Y10992 | Vitis vinifera | AAA73945.1 | L33904 | Brassica oleracea |
| AAF13707.1 | AF199508 | Fragaria x ananassa | AAA73946.1 | L33905 | Brassica oleracea |
| AAA34089.1 | M29279 | Nicotiana tabacum | AAA64310.1 | U22174 | Brassica napus |
| CRA43854.1 | X61679 | Nicotiana tabacum | AAA73947.1 | L33906 | Brassica oleracea |
| CAA04642.1 | AJ001268 | Hordeum vulgare | AAA73948.1 | L33907 | Brassica oleracea |
| CAC22330.1 | AJ298304 | Fagus sylvatica | | | |

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|-----------------|----------|----------------------------|-----------------|----------|---------------------------------|
| AAA32995.1 | L29767 | Brassica oleracea | CAA64221.1 | X94449 | Pimpinella brachycarpa |
| AAG29777.1 | AF228333 | Gossypium hirsutum | BAA93463.1 | AB028075 | Physcomitrella patens |
| AAF35186.1 | AF195865 | Gossypium hirsutum | AAF19980.1 | AF211193 | Oryza sativa |
| AAF35184.1 | AF195863 | Gossypium hirsutum | CAA65456.2 | X96681 | Oryza sativa |
| AAC00499.1 | AF044204 | Gossypium hirsutum | AAK31270.1 | AC079890 | Oryza sativa |
| AAD09107.1 | AF101038 | Brassica napus | AAD37700.1 | AF145731 | Oryza sativa |
| AAW75599.1 | U15153 | Gossypium hirsutum | AAD37695.1 | AF145726 | Oryza sativa |
| AB34774.1 | S78173 | Gossypium hirsutum | AAD37696.1 | AF145727 | Oryza sativa |
| AAK28533.1 | AF329829 | Corylus avellana | CAA06717.1 | AJ005820 | Craterostigma plantagineum |
| AAF28385.1 | AF151214 | Nicotiana glauca | BAA93462.1 | AB028074 | Physcomitrella patens |
| AAA34032.1 | M58635 | Spinacia oleracea | BAA05622.1 | D26573 | Daucus carota |
| AAC49860.1 | U72765 | Phaseolus vulgaris | AAD37698.1 | AF145729 | Oryza sativa |
| AAF26449.1 | AF221501 | Prunus avium | BAA05625.1 | D26576 | Daucus carota |
| AAF35185.1 | AF195864 | Gossypium hirsutum | BAA21017.1 | D26578 | Daucus carota |
| AAF26450.1 | AF221502 | Malus x domestica | AAF01765.1 | AF184278 | Glycine max |
| CAA50660.1 | X71667 | Sorghum bicolor | AAF01764.2 | AF184277 | Glycine max |
| CAA05771.1 | AJ002958 | Cicer arietinum | BAA93464.1 | AB028076 | Physcomitrella patens |
| CAA65475.1 | X96714 | Prunus dulcis | BAA05624.1 | D26575 | Daucus carota |
| AAF26451.1 | AF221503 | Pyrus communis | BAA93466.1 | AB028078 | Physcomitrella patens |
| CAA65477.1 | X96716 | Prunus dulcis | CAB67118.1 | Y17306 | Lycopersicon esculentum |
| AAD46683.1 | AF171094 | Lilium longiflorum | BAA93468.1 | AB028080 | Physcomitrella patens |
| CAA50661.1 | X71668 | Sorghum bicolor | AAD37697.1 | AF145728 | Oryza sativa |
| CAA44267.1 | X62395 | Nicotiana tabacum | AAF73482.1 | AF268422 | Brassica rapa subsp. pekinensis |
| AAA91050.1 | L31938 | Brassica rapa | BAA05623.1 | D26574 | Daucus carota |
| AAA33493.1 | J04176 | Zea mays | BAA93465.1 | AB028077 | Physcomitrella patens |
| CAB96874.1 | AJ277164 | Malus x domestica | SEQ ID NO. 2124 | | |
| CAA85484.1 | Z37115 | Hordeum vulgare | AAA32913.1 | M32885 | Persea americana |
| AAG27707.1 | AF302788 | Triticum aestivum | AAA19701.1 | L24438 | Thlaspi arvense |
| CAA83459.1 | Z31588 | Gerbera hybrida | AAC39318.1 | AF029858 | Sorghum bicolor |
| AAF71695.1 | AF198168 | Aerides japonica | BAB40323.1 | AB037244 | Asparagus officinalis |
| AAA74624.1 | U31766 | Oryza sativa | AAB94589.1 | AF022460 | Glycine max |
| AAB70539.1 | AF017359 | Oryza sativa | CAA70575.1 | Y09423 | Nepeta racemosa |
| AAB06443.1 | U66105 | Zea mays | BAB40324.1 | AB037245 | Asparagus officinalis |
| CAA85483.1 | Z37114 | Hordeum vulgare | BAA03635.1 | D14990 | Solanum melongena |
| CAA50662.1 | X71669 | Sorghum bicolor | AAF27282.1 | AF122821 | Capsicum annuum |
| | | | CAA50645.1 | X71654 | Solanum melongena |
| | | | AAB94584.1 | AF022157 | Glycine max |
| | | | CAA50312.1 | X70981 | Solanum melongena |
| | | | AAB94588.1 | AF022459 | Glycine max |
| | | | CAA70576.1 | Y09424 | Nepeta racemosa |
| SEQ ID NO. 2123 | | | | | |
| CAA06728.1 | AJ005833 | Craterostigma plantagineum | | | |
| CAA64491.1 | X95193 | Pimpinella brachycarpa | | | |
| CAA63222.1 | X92489 | Glycine max | | | |
| CAA64152.1 | X94375 | Pimpinella brachycarpa | | | |

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|-----------------|----------|--------------------------------|-----------------|----------|-------------------------|
| AAA087579.1 | U45856 | Zea mays | AAA03618.1 | M80608 | Lycopersicon esculentum |
| AAA003442.1 | U02886 | Atriplex nummularia | AAC19114.1 | AF067863 | Solanum tuberosum |
| CAA53269.1 | X75597 | Atriplex nummularia | AAA18928.1 | U01901 | Solanum tuberosum |
| AAA33033.1 | J05223 | Mesembryanthemum crystallinum | AAA63539.1 | M60402 | Nicotiana tabacum |
| AAA33031.1 | M29956 | Mesembryanthemum crystallinum | AAA63540.1 | M60403 | Nicotiana tabacum |
| CAA55116.1 | X78307 | Craterostigma plantagineum | AAA88794.1 | U01900 | Solanum tuberosum |
| AAA087580.1 | U45857 | Zea mays | AAA63541.1 | M59442 | Nicotiana tabacum |
| CAA42103.1 | X59517 | Antirrhinum majus | AB82772.2 | AF001523 | Musa acuminata |
| AAA82047.1 | U31676 | Oryza sativa | AAF08679.1 | AF004838 | Musa acuminata |
| AAAG23799.1 | AF260733 | Cucurbita pepo | AAA19111.1 | U01902 | Solanum tuberosum |
| CAA42904.1 | X60346 | Petunia x hybrida | AAC04710.1 | AF034106 | Glycine max |
| CAA51071.1 | X72381 | Physcomitrella patens | AAC04714.1 | AF034113 | Glycine max |
| CAA42905.1 | X60347 | Magnolia liliiflora | CAB91554.1 | AJ277900 | Vitis vinifera |
| SEQ ID NO. 2128 | | | AAA34082.1 | M20620 | Nicotiana tabacum |
| CAA72092.1 | Y11209 | Nicotiana tabacum | CAA03908.1 | AJ000081 | Citrus sinensis |
| AAD02069.1 | AF036939 | Chlamydomonas reinhardtii | AB03501.1 | U41323 | Glycine max |
| AAC49896.1 | AF027727 | Chlamydomonas reinhardtii | AAA92013.1 | U49454 | Prunus persica |
| AAD55566.1 | AF110784 | Volvex carteri f. nagariensis | AAA33946.1 | M37753 | Glycine max |
| CAC21230.1 | AJ277379 | Triticum turgidum subsp. durum | AAA63542.1 | M59443 | Nicotiana tabacum |
| AAA19660.1 | U11496 | Triticum aestivum | AAF34761.1 | AF227953 | Capsicum annuum |
| CAC21231.1 | AJ277380 | Triticum turgidum subsp. durum | AD33881.1 | AF141654 | Nicotiana tabacum |
| CAC21229.1 | AJ277378 | Triticum turgidum subsp. durum | AAG34080.1 | AF294849 | Capsicum annuum |
| CAC21228.1 | AJ277377 | Triticum turgidum subsp. durum | AAF33405.1 | AF230109 | Populus x canescens |
| AB05641.1 | U41385 | Ricinus communis | AD33380.1 | AF141653 | Nicotiana tabacum |
| CAA77575.1 | Z11499 | Medicago sativa | CAA57255.1 | X81560 | Nicotiana tabacum |
| AAD28260.1 | AF131223 | Datisca glomerata | AAA34053.1 | M60464 | Nicotiana tabacum |
| BAA92322.1 | AB039278 | Oryza sativa | SEQ ID NO. 2131 | | |
| BAA77026.1 | AB026252 | Lithospermum erythrorhizon | AAD37698.1 | AF145729 | Oryza sativa |
| SEQ ID NO. 2130 | | | BAA05624.1 | D26575 | Daucus carota |
| AAA87456.1 | U22147 | Hevea brasiliensis | AAF01765.1 | AF184278 | Glycine max |
| CAB38443.1 | AJ133470 | Hevea brasiliensis | CAA64417.1 | X94947 | Lycopersicon esculentum |
| AAG24921.1 | AF311749 | Hevea brasiliensis | BAA93465.1 | AB028077 | Physcomitrella patens |
| AAF44667.1 | AF239617 | Vitis vinifera | BAB18171.1 | AB042769 | Zinnia elegans |
| AAB41551.1 | U27179 | Medicago sativa subsp. sativa | BAA93460.1 | AB028072 | Physcomitrella patens |
| ABAB24398.1 | S51479 | Pisum sativum | BAA93466.1 | AB028078 | Physcomitrella patens |
| CAA37289.1 | X53129 | Phaseolus vulgaris | BAA93461.1 | AB028073 | Physcomitrella patens |
| AAA34078.1 | M63634 | Nicotiana plumbaginifolia | BAA05625.1 | D26576 | Daucus carota |
| AAA51643.1 | M23120 | Nicotiana plumbaginifolia | BAA05622.1 | D26573 | Daucus carota |
| CAA30261.1 | X07280 | Nicotiana plumbaginifolia | BAA93467.1 | AB028079 | Physcomitrella patens |
| | | | BAA93464.1 | AB028076 | Physcomitrella patens |

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|-----------------|----------|-------------------------------|-------------------------|----------|---------------------------------------|
| AAF37697.1 | AF145728 | Oryza sativa | CAC10514.1 | AJ299019 | Samanea saman |
| AAF01764.2 | AF184277 | Glycine max | CAC05488.1 | AJ271446 | Populus tremula x Populus tremuloides |
| BAA21017.1 | D26578 | Daucus carota | | | |
| BAB18168.1 | AB042766 | Zinnia elegans | SEQ ID NO. 2134 | | |
| BAA93468.1 | AB028080 | Physcomitrella patens | CAA55693.1 | X79086 | Zea mays |
| BAA05623.1 | D26574 | Daucus carota | CAA55691.1 | X79085 | Zea mays |
| BAAAD37699.1 | AF145730 | Oryza sativa | AAF97508.1 | AF242298 | Oryza sativa |
| AAAD38144.1 | AF139497 | Prunus armeniaca | | | |
| AAA63768.2 | AF339748 | Helianthus annuus | SEQ ID NO. 2135 | | |
| BAA93463.1 | AB028075 | Physcomitrella patens | AAG43509.1 | AF210049 | Petunia x hybrida |
| CAA64491.1 | X95193 | Pimpinella brachycarpa | CAA44807.1 | X63093 | Lycopersicon esculentum |
| CAA64221.1 | X94449 | Pimpinella brachycarpa | | | |
| CAA64152.1 | X94375 | Pimpinella brachycarpa | SEQ ID NO. 2136 | | |
| AAAD37700.1 | AF145731 | Oryza sativa | AAG41776.1 | AF212990 | Cucurbita maxima |
| AAAD37695.1 | AF145726 | Oryza sativa | BAB12433.1 | AB025030 | Coptis japonica |
| CAA06728.1 | AJ005833 | Craterostigma plantagineum | AAB17562.1 | U72654 | Eustoma grandiflorum |
| CAA62608.1 | X91212 | Lycopersicon esculentum | CAA50647.1 | X71656 | Solanum melongena |
| CAA63222.1 | X92489 | Glycine max | AAD56282.1 | AF155332 | Petunia x hybrida |
| CAA65456.2 | X96681 | Oryza sativa | AAB94587.1 | AF022458 | Glycine max |
| AAF19980.1 | AF211193 | Oryza sativa | AAC39453.1 | AF014801 | Eschscholzia californica |
| | | | AAC39452.1 | AF014800 | Eschscholzia californica |
| | | | AAA32913.1 | M32885 | Persea americana |
| SEQ ID NO. 2132 | | | CAA50155.1 | X70824 | Solanum melongena |
| AAF33669.1 | AF079871 | Nicotiana tabacum | CAA50648.1 | X71657 | Solanum melongena |
| AAF33670.1 | AF079872 | Nicotiana tabacum | AAB94593.1 | AF022464 | Glycine max |
| AAB53255.1 | U65390 | Nicotiana tabacum | AAB94588.1 | AF022459 | Glycine max |
| CAB62555.1 | AJ249962 | Daucus carota | BAA84071.1 | AB028151 | Antirrhinum majus |
| CAB65254.1 | X96390 | Lycopersicon esculentum | AAF05621.1 | AF191772 | Papaver somniferum |
| BAA96150.1 | AP002092 | Oryza sativa | CAA70575.1 | Y09423 | Nepeta racemosa |
| CAB54856.1 | AJ132686 | Zea mays | AAC32274.1 | AF081575 | Petunia x hybrida |
| BAA96192.1 | AP002093 | Oryza sativa | AAD37433.1 | AF150881 | Lycopersicon esculentum x |
| AAAD39492.1 | AF145272 | Samanea saman | Lycopersicon peruvianum | | |
| CAB56175.1 | X79779 | Solanum tuberosum | BAA92894.1 | AB006790 | Petunia x hybrida |
| CAB68912.1 | Y07632 | Zea mays | BAB40324.1 | AB037245 | Asparagus officinalis |
| CAB71598.1 | Y10579 | Vicia faba | CAA70576.1 | Y09424 | Nepeta racemosa |
| CAC05489.1 | AJ271447 | Populus tremula x Populus | AAB94589.1 | AF022460 | Glycine max |
| tremuloides | | | BAB40323.1 | AB037244 | Asparagus officinalis |
| AAAD16278.1 | AF099095 | Samanea saman | AAD47832.1 | AF166332 | Nicotiana tabacum |
| AAF81251.1 | AF267755 | Mesembryanthemum crystallinum | | | |
| BAA84085.1 | AB032074 | Nicotiana paniculata | | | |
| AAF36832.1 | AF207745 | Triticum aestivum | | | |
| CRA12645.1 | AJ225805 | Egeria densa | | | |
| | | | SEQ ID NO. 2138 | | |

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|-----------------|------------|----------------------|-----------------|----------|----------------------|
| SEQ ID NO. 2142 | AB048713 | Pisum sativum | AAC49585.1 | U49103 | Triticum aestivum |
| | BB39155.1 | | AAC49584.1 | U48693 | Triticum aestivum |
| | AF263457 | Zea mays | AAC49583.1 | U48692 | Triticum aestivum |
| | AF067400 | Zea mays | AAC49582.1 | U48691 | Triticum aestivum |
| | AP001168 | Oryza sativa | AAC49580.1 | U48689 | Triticum aestivum |
| | AF067401 | Oryza sativa | AAC49579.1 | U48688 | Triticum aestivum |
| | AB048714 | Pisum sativum | AAC49578.1 | U48242 | Triticum aestivum |
| | | | AAB36130.1 | S81594 | Vigna radiata |
| | | | CAA78287.1 | Z12827 | Oryza sativa |
| SEQ ID NO. 2146 | | | | | |
| | AAA80588.1 | Glycine max | AAB46588.1 | U83402 | Capsicum annuum |
| | CAA54678.1 | Zea mays | CAA61980.1 | X89890 | Bidens pilosa |
| | CAA76741.1 | Pisum sativum | AAA32938.1 | M27303 | Hordeum vulgare |
| | CAA84491.1 | Helianthus tuberosus | BAA88540.1 | AP000969 | Oryza sativa |
| | | | AAF65511.1 | AF108889 | Capsicum annuum |
| | | | AAC36059.1 | AF042840 | Oryza sativa |
| SEQ ID NO. 2147 | | | AAA33900.1 | L18914 | Oryza sativa |
| | CAA83924.1 | Brassica napus | CAA78288.1 | Z12828 | Oryza sativa |
| | AAF37386.1 | Medicago truncatula | AAA16320.1 | L14071 | Bryonia dioica |
| | | | AAA19571.1 | U10150 | Brassica napus |
| | | | AAA87347.1 | M88307 | Brassica juncea |
| | | | CAA52602.1 | X74490 | Zea mays |
| SEQ ID NO. 2149 | | | | | |
| | AAA34238.1 | Vigna radiata | SEQ ID NO. 2152 | | |
| | CAA36644.1 | Medicago sativa | CAA42727.1 | X60158 | Hordeum vulgare |
| | AAD10245.1 | Phaseolus vulgaris | AAD46189.1 | AF157017 | Tortula ruralis |
| | AAD10244.1 | Phaseolus vulgaris | | | |
| | CAA74307.1 | Zea mays | SEQ ID NO. 2153 | | |
| | CAA46150.1 | Oryza sativa | AAF36491.1 | AF129479 | Hordeum vulgare |
| | AAC36058.1 | Oryza sativa | BAB32443.1 | AB055630 | Phragmites australis |
| | AAD10246.1 | Phaseolus vulgaris | BAB32442.1 | AB055629 | Phragmites australis |
| | CAA54583.1 | Zea mays | BAB32444.1 | AB055631 | Phragmites australis |
| | BAA87825.1 | Oryza sativa | BAB32445.1 | AB055632 | Phragmites australis |
| | AAA92681.1 | Pisum sativum | AAF36497.1 | AF129485 | Oryza sativa |
| | AAA33706.1 | Petunia x hybrida | AAF36496.1 | AF129484 | Hordeum vulgare |
| | AAA33705.1 | Petunia x hybrida | AAF36492.1 | AF129480 | Hordeum vulgare |
| | CAA43143.1 | Malus x domestica | CAC15061.1 | AJ300161 | Hordeum vulgare |
| | CAA78301.1 | Lilium longiflorum | | | |
| | CAA42423.1 | Daucus carota | | | |
| | CAA67054.1 | Capsicum annuum | | | |
| | AAG27432.1 | Elaeis guineensis | | | |
| | AAG11418.1 | Prunus avium | SEQ ID NO. 2154 | | |
| | AAA34237.1 | Vigna radiata | AAF43095.1 | AF053769 | Malus x domestica |
| | AAC49587.1 | Triticum aestivum | AAB81079.1 | AF022390 | Hordeum vulgare |
| | AA49586.1 | Triticum aestivum | AAB41849.1 | U65648 | Solanum tuberosum |

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|-----------------|----------|---------------------------|-----------------|----------|-------------------------------|
| AAC32818.1 | AF050181 | Oryza sativa | AAC49583.1 | U48692 | Triticum aestivum |
| BAB18583.1 | AB043955 | Ceratopteris richardii | AAC49582.1 | U48691 | Triticum aestivum |
| AAD13611.1 | AF100455 | Zea mays | AAK25753.1 | AF334833 | Castanea sativa |
| BAB18582.1 | AB043954 | Ceratopteris richardii | AAA33706.1 | M80836 | Petunia x hybrida |
| BAB18584.1 | AB043956 | Ceratopteris richardii | CAA74307.1 | Y13974 | Zea mays |
| AAC33008.1 | AF080104 | Pisum sativum | AAA33705.1 | M80831 | Petunia x hybrida |
| AAC32817.1 | AF050180 | Oryza sativa | AAD10244.1 | AF030032 | Phaseolus vulgaris |
| AAD09582.1 | U76409 | Lycopersicon esculentum | CAA36644.1 | X52398 | Medicago sativa |
| AAD00252.1 | U76408 | Lycopersicon esculentum | CAA43143.1 | X60738 | Malus x domestica |
| AAG27464.1 | AF308454 | Medicago truncatula | CAA78301.1 | Z12839 | Lilium longiflorum |
| AAC49917.1 | AF000141 | Lycopersicon esculentum | AAB68399.1 | U79736 | Helianthus annuus |
| AAD00251.1 | U76407 | Lycopersicon esculentum | CAA42423.1 | X59751 | Daucus carota |
| AAF23753.2 | AF193813 | Brassica oleracea | AAA34238.1 | L20507 | Vigna radiata |
| SEQ ID NO. 2157 | | | AAG27432.1 | AF295637 | Elaeis guineensis |
| AAF31151.1 | AF078679 | Olea europaea | AAG11418.1 | AF292108 | Prunus avium |
| AAF31152.1 | AF078680 | Olea europaea | CAA74111.1 | Y13784 | Mougeotia scalaris |
| CAB63264.1 | AJ251808 | Lotus japonicus | AAA92681.1 | U13882 | Pisum sativum |
| AAA92677.1 | U13736 | Pisum sativum | SEQ ID NO. 2158 | | |
| AAA33083.1 | M20729 | Chlamydomonas reinhardtii | AAG43835.1 | AF213455 | Zea mays |
| BAA94697.1 | AB041712 | Chara corallina | AAC36698.1 | AF075580 | Mesembryanthemum crystallinum |
| BAA94696.1 | AB041711 | Chara corallina | CAC10359.1 | AJ277087 | Nicotiana tabacum |
| BAA96536.1 | AB044286 | Chara corallina | CAB90633.1 | AJ277743 | Fagus sylvatica |
| AAK11255.1 | AF329729 | Nicotiana tabacum | AAC36697.1 | AF075579 | Mesembryanthemum crystallinum |
| AAB67884.1 | U62865 | Dunaliella salina | CAC10358.1 | AJ277086 | Nicotiana tabacum |
| CAA67054.1 | X98404 | Capsicum annuum | CAA72341.1 | Y11607 | Medicago sativa |
| BAA87825.1 | AP000815 | Oryza sativa | AAD17804.1 | AF092431 | Lotus japonicus |
| CAA62150.1 | X90560 | Physcomitrella patens | AAC36700.1 | AF075582 | Mesembryanthemum crystallinum |
| AAB46588.1 | U83402 | Capsicum annuum | CAC09575.1 | AJ298987 | Fagus sylvatica |
| AAA85155.1 | U20294 | Solanum tuberosum | AAD17805.1 | AF092432 | Lotus japonicus |
| AAA62351.1 | U20295 | Solanum tuberosum | AAC36699.1 | AF075581 | Mesembryanthemum crystallinum |
| AAA85156.1 | U20296 | Solanum tuberosum | AAC26828.1 | AF075603 | Oryza sativa |
| AAA85157.1 | U20297 | Solanum tuberosum | CAB90634.1 | AJ277744 | Fagus sylvatica |
| AAF65511.1 | AF108889 | Capsicum annuum | AAB93832.1 | U81960 | Zea mays |
| CAA61980.1 | X89890 | Bidens pilosa | AAD11430.1 | AF097667 | Mesembryanthemum crystallinum |
| AAA33900.1 | L18914 | Oryza sativa | AAC35951.1 | AF079355 | Mesembryanthemum crystallinum |
| CAA78288.1 | Z12828 | Oryza sativa | CAC09576.1 | AJ298988 | Fagus sylvatica |
| CAA54583.1 | X77397 | Zea mays | SEQ ID NO. 2159 | | |
| AAA87347.1 | M88307 | Brassica juncea | BAB19864.1 | AB052885 | Oryza sativa |
| AAA19571.1 | U10150 | Brassica napus | CAA04511.1 | AJ001061 | Vitis vinifera |
| AAD10245.1 | AF030033 | Phaseolus vulgaris | | | |

| Accession | Species | Accession | Species | Accession | Species | Accession | Species |
|-----------------|----------|-------------------------------|-----------------|-----------|-------------------------------|-----------------|----------|
| AAB06594.1 | U38651 | Medicago truncatula | BAA96628.1 | AP002482 | Oryza sativa | BAA96628.1 | AP002482 |
| CAB07812.1 | 293775 | Vicia faba | CAA73068.1 | Y12465 | Sorghum bicolor | CAA73068.1 | Y12465 |
| CAA47324.1 | X66856 | Nicotiana tabacum | CAA73067.1 | Y12464 | Sorghum bicolor | CAA73067.1 | Y12464 |
| CAA70777.1 | Y09590 | Vitis vinifera | CAA65244.1 | X95997 | Solanum tuberosum | CAA65244.1 | X95997 |
| AAA79761.1 | L08196 | Ricinus communis | CAA07813.1 | AJ007990 | Hordeum vulgare | CAA07813.1 | AJ007990 |
| AAA79857.1 | L08188 | Ricinus communis | CAA46556.1 | X65606 | Hordeum vulgare | CAA46556.1 | X65606 |
| BAB19863.1 | AB052884 | Oryza sativa | CAA46554.1 | X65604 | Hordeum vulgare | CAA46554.1 | X65604 |
| CAB526224 | AJ132224 | Lycopersicon esculentum | AB05457.1 | U55768 | Oryza sativa | AB05457.1 | U55768 |
| CAA09419.1 | AJ010942 | Lycopersicon esculentum | AB062693.1 | AF004947 | Oryza sativa | AB062693.1 | AF004947 |
| CAB06079.1 | Z83829 | Picea abies | BAA83689.1 | AB011968 | Oryza sativa | BAA83689.1 | AB011968 |
| BAB19862.1 | AB052883 | Oryza sativa | BAA83688.1 | AB011967 | Oryza sativa | BAA83688.1 | AB011967 |
| CAA68813.1 | Y07520 | Chlorella kessleri | AAF22219.1 | AF141378 | Zea mays | AAF22219.1 | AF141378 |
| CAA39036.1 | X55349 | Chlorella kessleri | BAA34675.1 | AB011670 | Triticum aestivum | BAA34675.1 | AB011670 |
| CAA53192.1 | X75440 | Chlorella kessleri | SEQ ID NO. 2164 | | | SEQ ID NO. 2164 | |
| CAB52688.1 | AJ132223 | Lycopersicon esculentum | AAB58348.1 | U29095 | Triticum aestivum | AAB58348.1 | U29095 |
| AD55054.1 | AF173655 | Beta vulgaris | AAD00239.1 | U73938 | Nicotiana tabacum | AAD00239.1 | U73938 |
| CAB52690.1 | AJ132225 | Lycopersicon esculentum | AAA96325.1 | M94726 | Triticum aestivum | AAA96325.1 | M94726 |
| AAG43998.1 | AF215837 | Apium graveolens var. dulce | CAA81443.1 | Z26846 | Mesembryanthemum crystallinum | CAA81443.1 | Z26846 |
| AAF74567.1 | AF215853 | Solanum tuberosum | AAG60195.1 | AC084763 | Oryza sativa | AAG60195.1 | AC084763 |
| AAF74565.1 | AF215851 | Spinacia oleracea | BAA19573.1 | AB002109 | Oryza sativa | BAA19573.1 | AB002109 |
| AAF74566.1 | AF215852 | Nicotiana tabacum | BAA13608.1 | D88399 | Oryza sativa | BAA13608.1 | D88399 |
| AAF74568.1 | AF215854 | Zea mays | AAD00240.1 | U73939 | Nicotiana tabacum | AAD00240.1 | U73939 |
| SEQ ID NO. 2163 | | | AAB68962.1 | L38855 | Glycine max | AAB68962.1 | L38855 |
| L38855 | | Glycine max | CAA06503.1 | AJ005373 | Craterostigma plantagineum | CAA06503.1 | AJ005373 |
| CAA06503.1 | AJ005373 | Craterostigma plantagineum | AAF27340.1 | AF186020 | Vicia faba | AAF27340.1 | AF186020 |
| AAG60195.1 | AC084763 | Oryza sativa | AAC98509.1 | AF100162 | Chlamydomonas reinhardtii | AAC98509.1 | AF100162 |
| BAA13608.1 | D88399 | Oryza sativa | BAA96628.1 | AP002482 | Oryza sativa | BAA96628.1 | AP002482 |
| AAD00239.1 | U73938 | Nicotiana tabacum | CAA73067.1 | Y12464 | Sorghum bicolor | CAA73067.1 | Y12464 |
| BAA19573.1 | AB002109 | Oryza sativa | CAA71142.1 | Y10036 | Cucumis sativus | CAA71142.1 | Y10036 |
| AAB58348.1 | U29095 | Triticum aestivum | AAD23582.1 | AF128443 | Glycine max | AAD23582.1 | AF128443 |
| AAD00240.1 | U73939 | Nicotiana tabacum | CAA73068.1 | Y12465 | Sorghum bicolor | CAA73068.1 | Y12465 |
| CAA81443.1 | Z26846 | Mesembryanthemum crystallinum | BAA05649.1 | D26602 | Nicotiana tabacum | BAA05649.1 | D26602 |
| AAA96325.1 | M94726 | Triticum aestivum | CAA65244.1 | X95997 | Solanum tuberosum | CAA65244.1 | X95997 |
| AAF27340.1 | AF186020 | Vicia faba | CAA57898.1 | X82548 | Hordeum vulgare | CAA57898.1 | X82548 |
| AAC98509.1 | AF100162 | Chlamydomonas reinhardtii | AAC99329.1 | AF062479 | Oryza sativa | AAC99329.1 | AF062479 |
| AF128443 | | Glycine max | CAA07813.1 | AJ007990 | Hordeum vulgare | CAA07813.1 | AJ007990 |
| D26602 | | Nicotiana tabacum | CAA46556.1 | X65606 | Hordeum vulgare | CAA46556.1 | X65606 |
| BAA05649.1 | D26602 | Cucumis sativus | AAB05457.1 | U55768 | Oryza sativa | AAB05457.1 | U5576 |

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|-----------------|----------|-------------------------|-----------------|----------|-------------------------------|
| BAA83688.1 | AB011967 | Oryza sativa | BAA88222.1 | AB028650 | Nicotiana tabacum |
| BAA83689.1 | AB011968 | Oryza sativa | BAA81736.1 | AB029165 | Glycine max |
| BAA34675.1 | AB011670 | Triticum aestivum | AAA33500.1 | M73028 | Zea mays |
| AAB62693.1 | AF004947 | Oryza sativa | AAG36774.1 | AF210616 | Zea mays |
| SEQ ID NO. 2165 | | | BAA23339.1 | D88619 | Oryza sativa |
| CAA72271.1 | Y11483 | Brassica napus | CAA72217.1 | Y11414 | Oryza sativa |
| CAA72270.1 | Y11482 | Brassica napus | BAA81733.2 | AB029162 | Glycine max |
| AAB72097.1 | AF021257 | Hordeum vulgare | BAA88224.1 | AB028652 | Nicotiana tabacum |
| AAB72096.1 | AF021256 | Hordeum vulgare | CAA66952.1 | X98308 | Lycopersicon esculentum |
| SEQ ID NO. 2166 | | | SEQ ID NO. 2169 | | |
| AAA86424.1 | U44386 | Lycopersicon esculentum | BAA95893.1 | AP002071 | Oryza sativa |
| AAF05766.1 | AF192758 | Glycine max | CAB51834.1 | 00069 | Oryza sativa |
| SEQ ID NO. 2168 | | | AAB09771.1 | U67422 | Zea mays |
| AAK19619.1 | AF336286 | Gossypium hirsutum | AAK11566.1 | AF318490 | Lycopersicon hirsutum |
| CAA64614.1 | X95296 | Lycopersicon esculentum | CAA97692.1 | Z73295 | Catharanthus roseus |
| CAA50224.1 | X70879 | Hordeum vulgare | AAK11674.1 | AF339747 | Lophopyrum elongatum |
| CAA50222.1 | X70877 | Hordeum vulgare | AAF43496.1 | AF131222 | Lophopyrum elongatum |
| CAA50221.1 | X70876 | Hordeum vulgare | AAF76313.1 | AF220603 | Lycopersicon esculentum |
| BAA23337.1 | D88617 | Oryza sativa | AB47421.1 | U59316 | Lycopersicon esculentum |
| BAA23338.1 | D88618 | Oryza sativa | AB47423.1 | U59315 | Lycopersicon pimpinellifolium |
| CAA72218.1 | Y11415 | Oryza sativa | AAK48914.1 | U02271 | Lycopersicon pimpinellifolium |
| CAA78386.1 | Z13996 | Petunia x hybrida | AAF76306.1 | AF220602 | Lycopersicon hirsutum |
| AAK19616.1 | AF336283 | Gossypium hirsutum | AAK11567.1 | AF318491 | Lycopersicon hirsutum |
| CAB43399.1 | AJ006292 | Antirrhinum majus | AAK21965.1 | AY028699 | Brassica napus |
| CAA50225.1 | X70880 | Hordeum vulgare | AAG25966.1 | AF302082 | Nicotiana tabacum |
| AAF22256.1 | AF161711 | Pimpinella brachycarpa | AAK11569.1 | AF318493 | Lycopersicon hirsutum |
| AAK19611.1 | AF336278 | Gossypium hirsutum | AAF66615.1 | AF142596 | Nicotiana tabacum |
| AAK19617.1 | AF336284 | Gossypium hirsutum | AAG03090.1 | AC073405 | Oryza sativa |
| CAA72186.1 | Y11351 | Oryza sativa | BAA83373.1 | AP000391 | Oryza sativa |
| CAA67600.1 | X99210 | Lycopersicon esculentum | BAA84787.1 | AP000559 | Oryza sativa |
| AAK19615.1 | AF336282 | Gossypium hirsutum | CAA74662.1 | Y14286 | Brassica oleracea |
| AAK19618.1 | AF336285 | Gossypium hirsutum | CAA67145.1 | X98520 | Brassica oleracea |
| BAA81732.1 | AB029161 | Glycine max | CAA73133.1 | Y12530 | Brassica oleracea |
| CAA72185.1 | Y11350 | Oryza sativa | AAK11568.1 | AF318492 | Lycopersicon hirsutum |
| AAG13574.1 | AC037425 | Oryza sativa | BAA78764.1 | AB023482 | Oryza sativa |
| BAA81731.1 | AB029160 | Glycine max | BAA94509.1 | AB041503 | Populus nigra |
| BAA81730.1 | AB029159 | Glycine max | BAA94510.1 | AB041504 | Populus nigra |
| CAA78387.1 | Z13997 | Petunia x hybrida | SEQ ID NO. 2172 | | |
| | | | BAA22422.1 | AB001379 | Glycyrrhiza echinata |

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|-----------------|----------|--------------------------|-----------------|----------|-------------------------------|
| BAA74465.1 | AB022732 | Glycyrrhiza echinata | AAG34808.1 | AF243373 | Glycine max |
| CAB43505.1 | AJ239051 | Cicer arietinum | AAG34800.1 | AF243365 | Glycine max |
| CAB41490.1 | AJ238439 | Cicer arietinum | CRA71784.1 | Y10820 | Glycine max |
| CAA10067.1 | AJ012581 | Cicer arietinum | AAG34844.1 | AF244701 | Zea mays |
| BAA93634.1 | AB025016 | Lotus japonicus | AAA68430.1 | J03679 | Solanum tuberosum |
| CAA04117.1 | AJ000478 | Helianthus tuberosus | CAA04391.1 | AJ000923 | Carica papaya |
| CAA04116.1 | AJ000477 | Helianthus tuberosus | AAG34831.1 | AF244688 | Zea mays |
| AAD56282.1 | AF155332 | Petunia x hybrida | CAA09187.1 | AJ010448 | Alopecurus myosuroides |
| BAA12159.1 | D83968 | Glycine max | CAA09188.1 | AJ010449 | Alopecurus myosuroides |
| BAE94590.1 | AF022461 | Glycine max | AAG34802.1 | AF243367 | Glycine max |
| CRA65580.1 | X96784 | Nicotiana tabacum | AAG34805.1 | AF243370 | Glycine max |
| AAA32913.1 | M32885 | Persea americana | AAG34832.1 | AF244689 | Zea mays |
| AAG09208.1 | AF175278 | Pisum sativum | AAG34837.1 | AF244694 | Zea mays |
| CAB56742.1 | AJ249800 | Cicer arietinum | AAG34836.1 | AF244693 | Zea mays |
| AAC49188.2 | U29333 | Pisum sativum | AAG34849.1 | AF244706 | Zea mays |
| AAG44132.1 | AF218296 | Pisum sativum | CAC24549.1 | AJ296343 | Cichorium intybus x Cichorium |
| BAA13076.1 | D86351 | Glycine max | endivia | | |
| AAC39454.1 | AF014802 | Eschscholzia californica | AAC32118.1 | AF051214 | Picea mariana |
| CRA64635.1 | X95342 | Nicotiana tabacum | AAG34795.1 | AF243360 | Glycine max |
| AAD38930.1 | AF135485 | Glycine max | AAG34841.1 | AF244698 | Zea mays |
| AAB17562.1 | U72654 | Eustoma grandiflorum | AAF29773.1 | AF159229 | Gossypium hirsutum |
| BAA92894.1 | AB006790 | Petunia x hybrida | SEQ ID NO. 2174 | | |
| AAC32274.1 | AF081575 | Petunia x hybrida | AAB67714.1 | AF013161 | Prunus serotina |
| BAA84072.1 | AB028152 | Torenia hybrida | CAA51194.1 | X72617 | Prunus serotina |
| CAA50155.1 | X70824 | Solanum melongena | AAB38536.1 | U78814 | Prunus serotina |
| BAB40324.1 | AB037245 | Asparagus officinalis | CAA69388.1 | Y08211 | Prunus dulcis |
| BAB40323.1 | AB037244 | Asparagus officinalis | AAB96764.1 | AF040079 | Prunus serotina |
| BAA74466.1 | AB022733 | Glycyrrhiza echinata | AAB96763.1 | AF040078 | Prunus serotina |
| SEQ ID NO. 2173 | | | AAC61982.1 | AF053886 | Prunus serotina |
| AAF64450.1 | AF239928 | Euphorbia esula | AAC61981.1 | AF053885 | Prunus serotina |
| ARG34803.1 | AF243368 | Glycine max | AAC61980.1 | AF053884 | Prunus serotina |
| AAG34796.1 | AF243361 | Glycine max | AAD02266.1 | AF043187 | Prunus serotina |
| AAG34809.1 | AF243374 | Glycine max | AAD02265.1 | AF043186 | Prunus serotina |
| AAG34797.1 | AF243362 | Glycine max | SEQ ID NO. 2176 | | |
| AAG34807.1 | AF243372 | Glycine max | CAA58994.1 | X84208 | Sinapis alba |
| AAG34798.1 | AF243363 | Glycine max | CAA76116.1 | Y16190 | Sinapis alba |
| AAG34804.1 | AF243369 | Glycine max | SEQ ID NO. 2177 | | |
| AAG34801.1 | AF243366 | Glycine max | CAA68190.1 | X99922 | Brassica napus |
| AAG34810.1 | AF243375 | Glycine max | | | |
| AAC18566.1 | AF048978 | Glycine max | | | |

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|----------------------------|-------------------------|-----------------|-----------------|
| SEQ ID NO. 2181 | SEQ ID NO. 2182 | SEQ ID NO. 2183 | SEQ ID NO. 2184 |
| AAAD37375.1 | AF145349 | AF069494 | AF069494 |
| AAA32676.1 | M37637 | AA85440.1 | U32624 |
| AAAD37429.2 | AF149279 | AAE27289.1 | AF140613 |
| BAA82307.1 | AB027753 | AAE27290.1 | AF140614 |
| CAA71494.1 | Y10468 | AAE6543.1 | AF140609 |
| CAA64413.1 | X94943 | AAE6544.1 | AF140610 |
| AAAB67737.1 | L77080 | BAA92894.1 | AB006790 |
| AAAB47602.1 | L07554 | AAE56282.1 | AF155332 |
| BAA14143.1 | D90115 | CAA50155.1 | X70824 |
| CAA66037.1 | X97351 | AAA32913.1 | X32885 |
| trichocarpa | | CAA64635.1 | X95342 |
| CAA62227.1 | X90694 | CAA65580.1 | X96784 |
| AAA65637.1 | L13654 | AAC32274.1 | AF081575 |
| AAD11482.1 | U51192 | CAB43505.1 | AJ239051 |
| AAF63027.1 | AF244924 | CAA04117.1 | AJ000478 |
| CAA50597.1 | X71593 | CAA04116.1 | AJ000477 |
| AAD37427.1 | AF149277 | AAB17562.1 | U72654 |
| CAA62226.1 | X90693 | AAG09208.1 | AF175278 |
| CAB67121.1 | Y19023 | BAA93634.1 | AB025016 |
| BAA01877.1 | D11102 | AAG44132.1 | AF218296 |
| AAD11481.1 | U51191 | AAC49188.2 | U29333 |
| CAA80502.1 | Z22920 | AAB94587.1 | AF022458 |
| AAB41810.1 | L36156 | AAB94590.1 | AF022461 |
| AAD37430.1 | AF149280 | BAA12159.1 | D83968 |
| BAA03644.1 | D14997 | BAA84071.1 | AB028151 |
| CAA62225.1 | X90692 | AAB94588.1 | AF022459 |
| CAB94692.1 | AJ242742 | BAA74465.1 | AB022732 |
| BAA01992.1 | D11396 | BAA84072.1 | AB028152 |
| AAB41811.1 | L36157 | | |
| AAB97734.1 | AF014502 | | |
| CAA40796.1 | X57564 | | |
| AAC98519.1 | AF007211 | | |
| AAA34108.1 | J02979 | | |
| BAA11853.1 | D83225 | | |
| CAA66034.1 | X97348 | | |
| trichocarpa | | | |
| AAA65636.1 | L13653 | | |
| AAF63026.1 | AF244923 | | |
| BAA06335.1 | D30653 | | |
| Glycine max | Lycopersicon esculentum | | |
| Arachis hypogaea | Spinacia oleracea | | |
| Phaseolus vulgaris | Populus kitakamiensis | | |
| Nicotiana tabacum | | | |
| Spinacia oleracea | | | |
| Lycopersicon esculentum | | | |
| Stylosanthes humilis | | | |
| Linum usitatissimum | | | |
| Armoracia rusticana | | | |
| Populus balsamifera subsp. | | | |
| Medicago sativa | | | |
| Lycopersicon esculentum | | | |
| Glycine max | | | |
| Spinacia oleracea | | | |
| Lycopersicon esculentum | | | |
| Phaseolus vulgaris | | | |
| Medicago sativa | | | |
| Lycopersicon esculentum | | | |
| Populus kitakamiensis | | | |
| Glycine max | | | |
| Spirodela polyrrhiza | | | |
| Medicago sativa | | | |
| Phaseolus vulgaris | | | |
| Oryza sativa | | | |
| Medicago sativa | | | |
| Ipomoea batatas | | | |
| Nicotiana tabacum | | | |
| Medicago sativa | | | |
| Glycine max | | | |
| Armoracia rusticana | | | |
| Glycine max | | | |
| Nicotiana tabacum | | | |
| Populus nigra | | | |
| Populus balsamifera subsp. | | | |
| trichocarpa | | | |
| AAA65636.1 | L13653 | | |
| AAF63026.1 | AF244923 | | |
| BAA06335.1 | D30653 | | |
| trichocarpa | | | |
| CAA76680.1 | Y17192 | | |
| CAA66036.1 | X97350 | | |
| trichocarpa | | | |
| BAA08499.1 | D49551 | | |
| BAA92500.1 | AP001383 | | |
| CAC21393.1 | AJ401276 | | |
| Oryza sativa | | | |
| Oryza sativa | | | |
| Zea mays | | | |
| Sinapis alba | | | |
| Sorghum bicolor | | | |
| Manihot esculenta | | | |
| Manihot esculenta | | | |
| Triglochin maritimum | | | |
| Triglochin maritimum | | | |
| Petunia x hybrida | | | |
| Petunia x hybrida | | | |
| Solanum melongena | | | |
| Persea americana | | | |
| Nicotiana tabacum | | | |
| Nicotiana tabacum | | | |
| Petunia x hybrida | | | |
| Cicer arietinum | | | |
| Helianthus tuberosus | | | |
| Helianthus tuberosus | | | |
| Eustoma grandiflorum | | | |
| Pisum sativum | | | |
| Lotus japonicus | | | |
| Pisum sativum | | | |
| Pisum sativum | | | |
| Glycine max | | | |
| Glycine max | | | |
| Glycine max | | | |
| Antirrhinum majus | | | |
| Glycine max | | | |
| Glycyrrhiza echinata | | | |
| Torenia hybrida | | | |
| Medicago sativa | | | |

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|-------------|----------|----------------------------|-----------------|----------|-------------------------|
| CAA09881.1 | AJ011939 | Trifolium repens | AAA65637.1 | L13654 | Lycopersicon esculentum |
| CAA71495.1 | Y10469 | Spinacia oleracea | CAA71488.1 | Y10462 | Spinacia oleracea |
| AAB41812.1 | L36158 | Medicago sativa | AAA32676.1 | M37637 | Arachis hypogaea |
| AAD11483.1 | U51193 | Glycine max | BAA77389.1 | AB024439 | Scutellaria baicalensis |
| AAF63024.1 | AF244921 | Spinacia oleracea | CAA40796.1 | X57564 | Armoracia rusticana |
| AAD11484.1 | U51194 | Glycine max | SEQ ID NO. 2186 | | |
| AAB67737.1 | L77080 | Stylosanthes humilis | AAG34803.1 | AF243368 | Glycine max |
| CRA62226.1 | X90693 | Medicago sativa | AAG34797.1 | AF243362 | Glycine max |
| CRA62227.1 | X90694 | Medicago sativa | AAG34798.1 | AF243363 | Glycine max |
| AAC98519.1 | AF007211 | Glycine max | AAF64450.1 | AF239928 | Euphorbia esula |
| BAA77387.1 | AB024437 | Scutellaria baicalensis | AAG34796.1 | AF243361 | Glycine max |
| CAB67121.1 | Y19023 | Lycopersicon esculentum | AAG34801.1 | AF243366 | Glycine max |
| CAA50597.1 | X71593 | Lycopersicon esculentum | AAG34804.1 | AF243369 | Glycine max |
| CAB94692.1 | AJ242742 | Ipomoea batatas | AAG34807.1 | AF243372 | Glycine max |
| AAA98491.1 | L36981 | Petroselinum crispum | AAG34809.1 | AF243374 | Glycine max |
| AAD11481.1 | U51191 | Glycine max | AAG34810.1 | AF243375 | Glycine max |
| BAA01950.1 | D11337 | Vigna angularis | AAG34802.1 | AF243367 | Glycine max |
| AAD11482.1 | U51192 | Glycine max | AAG34808.1 | AF243373 | Glycine max |
| CAA66037.1 | X97351 | Populus balsamifera subsp. | AAG34844.1 | AF244701 | Zea mays |
| trichocarpa | | | CAA09188.1 | AJ010449 | Alopecurus myosuroides |
| AAB41810.1 | L36156 | Medicago sativa | CAA09187.1 | AJ010448 | Alopecurus myosuroides |
| AAD37427.1 | AF149277 | Phaseolus vulgaris | AAA68430.1 | J03679 | Solanum tuberosum |
| BAA07664.1 | D42065 | Nicotiana tabacum | AAG34837.1 | AF244694 | Zea mays |
| CAC21393.1 | AJ401276 | Zea mays | AAG34800.1 | AF243365 | Glycine max |
| BAA82306.1 | AB027752 | Nicotiana tabacum | AAG34831.1 | AF244688 | Zea mays |
| BAA07663.1 | D42064 | Nicotiana tabacum | AAC32118.1 | AF051214 | Picea mariana |
| BAA06335.1 | D30653 | Populus kitakamiensis | AAG34805.1 | AF243370 | Glycine max |
| CAA62225.1 | X90692 | Medicago sativa | AAC18566.1 | AF048978 | Glycine max |
| AAA34050.1 | M74103 | Nicotiana sylvestris | AAG34829.1 | AF244686 | Zea mays |
| AAD37430.1 | AF149280 | Phaseolus vulgaris | CAA04391.1 | AJ000923 | Carica papaya |
| AAB41811.1 | L36157 | Medicago sativa | CAA71784.1 | Y10820 | Glycine max |
| BAA14144.1 | D90116 | Armoracia rusticana | AAG34795.1 | AF243360 | Glycine max |
| BAA01877.1 | D11102 | Populus kitakamiensis | AAG34836.1 | AF244693 | Zea mays |
| CAA59485.1 | X85228 | Triticum aestivum | AAG34832.1 | AF244689 | Zea mays |
| BAA14143.1 | D90115 | Armoracia rusticana | AAG34833.1 | AF244690 | Zea mays |
| CAA66034.1 | X97348 | Populus balsamifera subsp. | AAG34849.1 | AF244706 | Zea mays |
| trichocarpa | | | AAG34806.1 | AF243371 | Glycine max |
| CAA76376.1 | Y16778 | Spinacia oleracea | CAA09189.1 | AJ010450 | Alopecurus myosuroides |
| AAB34108.1 | J02979 | Nicotiana tabacum | SEQ ID NO. 2187 | | |
| BAA96643.1 | AF002482 | Oryza sativa | | | |
| AAA32973.1 | M73234 | Hordeum vulgare | | | |

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|-------------------|----------|-------------------------------|-----------------|----------|----------------------------|
| AAD02848.1 | AF086839 | Populus tremula x Populus | AAG28490.1 | AF196350 | Lophopyrum elongatum |
| tremuloides | | | | | |
| BAA36555.1 | AB011798 | Citrus unshiu | SEQ ID NO. 2190 | | Mesembryanthemum crystalli |
| CAB66329.1 | AJ279687 | Betula pendula | AAF05112.1 | AF158091 | Lycopersicon esculentum |
| CAB77357.1 | U79562 | Pisum sativum | AAF19402.1 | AF203480 | Lycopersicon esculentum |
| CAB61887.1 | AJ250003 | Lycopersicon esculentum | AAF19403.1 | AF203481 | Kalanchoe fedtschenkoi |
| BAA36556.1 | AB011799 | Citrus unshiu | AAF06969.1 | AF162661 | Kalanchoe fedtschenkoi |
| BAB40808.1 | AB058921 | Nicotiana suaveolens x | AAF06970.1 | AF162662 | Glycine max |
| Nicotiana tabacum | | | AAF19401.1 | AF203479 | Brassica napus |
| AAB16804.1 | U68560 | Malus x domestica | AAF19404.1 | AF203482 | Ipomoea batatas |
| BAB40809.1 | AB058922 | Nicotiana suaveolens x | BAA13440.1 | D87707 | Daucus carota |
| Nicotiana tabacum | | | CAA39936.1 | X56599 | Mesembryanthemum crystalli |
| AAC32147.1 | AF051247 | Picea mariana | AAD17800.1 | AF090835 | Solanum tuberosum |
| CAB56223.1 | AJ133276 | Hordeum vulgare | AAD28192.2 | AF115406 | Fragaria x ananassa |
| CAB56224.1 | AJ133277 | Hordeum vulgare | AAB88537.1 | AF035944 | Nicotiana tabacum |
| AAC24568.2 | AF055909 | Zea mays | AAC25423.1 | AF072908 | Glycine max |
| | | | AAB80693.1 | U69174 | Zea mays |
| SEQ ID NO. 2188 | | | BAA12715.1 | D85039 | Medicago sativa |
| CAC12822.1 | AJ299252 | Nicotiana tabacum | CAA65500.1 | X96723 | Oryza sativa |
| AAC24587.1 | AF071893 | Prunus armeniaca | CAA57157.1 | X81394 | Oryza sativa |
| AAF23899.1 | AF193803 | Oryza sativa | BAA90814.1 | AF001168 | Zea mays |
| BAB16083.1 | AB036883 | Oryza sativa | AAA69507.1 | U28376 | Cucurbita pepo |
| AAF63205.1 | AF245119 | Mesembryanthemum crystallinum | AAB49984.1 | U90262 | Tortula ruralis |
| CAB96900.1 | AJ251250 | Catharanthus roseus | AAB70706.1 | U82087 | Zea mays |
| CAB96899.1 | AJ251249 | Catharanthus roseus | CAA07481.1 | AJ007366 | Vigna radiata |
| BAA78738.1 | AB023482 | Oryza sativa | AAC49405.1 | U08140 | Oryza sativa |
| AAF76898.1 | AF274033 | Atriplex hortensis | BAA85396.1 | AP000615 | Oryza sativa |
| BAA99376.1 | AP002526 | Oryza sativa | AAC05270.1 | AF048691 | Zea mays |
| | | | BAA12338.1 | D84408 | Oryza sativa |
| SEQ ID NO. 2189 | | | CAA57156.1 | X81393 | Marchantia polymorpha |
| AAF60173.1 | AF236068 | Elaeis guineensis | BAA81749.1 | AB017515 | Marchantia polymorpha |
| AAD23407.1 | AF112887 | Populus x canescens | BAA81751.1 | AB017517 | Marchantia polymorpha |
| AAG16973.1 | AF183903 | Petunia x hybrida | BAA81750.1 | AB017516 | Marchantia polymorpha |
| AAG16974.1 | AF183904 | Petunia x hybrida | BAA81748.1 | AB017515 | Marchantia polymorpha |
| CAA78483.1 | Z14110 | Lilium longiflorum | AAB80692.1 | U69173 | Glycine max |
| CAA78482.1 | Z14109 | Brassica napus | BAA13232.1 | D87042 | Zea mays |
| CAA66310.1 | X97725 | Zea mays | AAA61682.1 | L27484 | Zea mays |
| CAA66311.1 | X97726 | Zea mays | AAG46110.1 | AC073166 | Oryza sativa |
| CAA56786.1 | X80820 | Zea mays | CAA89202.1 | Z49233 | Chlamydomonas eugametos |
| AAC49404.1 | U58278 | Triticum aestivum | BAA02698.1 | D13436 | Oryza sativa |
| AAG28460.1 | AF195612 | Lophopyrum elongatum | AAF23900.1 | AF194413 | Oryza sativa |

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|-----------------|----------|-------------------------|-----------------|----------|----------------------------|
| AAF21062.1 | AF216527 | Dunaliella tertiolecta | AAA19571.1 | U10150 | Brassica napus |
| CAA58750.1 | X83869 | Daucus carota | CAA78301.1 | Z12839 | Lilium longiflorum |
| AAA33443.1 | L15390 | Zea mays | BAA88540.1 | AP000969 | Oryza sativa |
| AAK26164.1 | AY027885 | Cucumis sativus | AAB36130.1 | S81594 | Vigna radiata |
| BAA12692.1 | D84508 | Zea mays | AAC36059.1 | AF042840 | Oryza sativa |
| AAB47181.1 | S82324 | Zea mays | AAA33900.1 | L18914 | Oryza sativa |
| BAA12691.1 | D84507 | Zea mays | AAA34237.1 | L20691 | Vigna radiata |
| AAG01179.1 | AF289237 | Zea mays | CAA78288.1 | Z12828 | Oryza sativa |
| BAA22410.1 | D38452 | Zea mays | AAA32938.1 | M27303 | Hordeum vulgare |
| | | | CAA78287.1 | Z12827 | Oryza sativa |
| SEQ ID NO. 2191 | | | AAC49587.1 | U49105 | Triticum aestivum |
| BAA13032.1 | D86180 | Pisum sativum | AAC49586.1 | U49104 | Triticum aestivum |
| | | | AAC49583.1 | U48692 | Triticum aestivum |
| SEQ ID NO. 2192 | | | AAC49585.1 | U49103 | Triticum aestivum |
| AAD01600.1 | AF016713 | Lycopersicon esculentum | AAC49584.1 | U48693 | Triticum aestivum |
| CAC07206.1 | AJ278966 | Brassica napus | AAC49582.1 | U48691 | Triticum aestivum |
| AAC32034.1 | AF023472 | Hordeum vulgare | AAC49580.1 | U48689 | Triticum aestivum |
| AAF20002.1 | AF213936 | Prunus dulcis | AAC49579.1 | U48688 | Triticum aestivum |
| AAF07875.1 | AF140606 | Oryza sativa | AAC49578.1 | U48242 | Triticum aestivum |
| BAB19760.1 | AB052788 | Glycine max | AAC36058.1 | AF042839 | Oryza sativa |
| CAA93316.1 | Z69370 | Cucumis sativus | AAA85156.1 | U20296 | Solanum tuberosum |
| BAB19757.1 | AB052785 | Glycine max | AAD10244.1 | AF030032 | Phaseolus vulgaris |
| BAB19756.1 | AB052784 | Glycine max | CAA36644.1 | X52398 | Medicago sativa |
| AAB69642.1 | AF000392 | Lotus japonicus | AAA85155.1 | U20294 | Solanum tuberosum |
| AAD16016.1 | AF080545 | Nepenthes alata | AAB68399.1 | U79736 | Helianthus annuus |
| AAD42860.1 | AF154930 | Prunus dulcis | AAA62351.1 | U20295 | Solanum tuberosum |
| | | | AAA34238.1 | L20507 | Vigna radiata |
| SEQ ID NO. 2193 | | | AAA85157.1 | U20297 | Solanum tuberosum |
| CAA61980.1 | X89890 | Bidens pilosa | AAA33705.1 | M80831 | Petunia x hybrida |
| AAF73157.1 | AF150059 | Brassica napus | CAA74307.1 | Y13974 | Zea mays |
| BAA87825.1 | AP000815 | Oryza sativa | CAA54583.1 | X77397 | Zea mays |
| CAA67054.1 | X98404 | Capsicum annuum | | | |
| AAA87347.1 | M88307 | Brassica juncea | SEQ ID NO. 2194 | | |
| AAG27432.1 | AF295637 | Elaeis guineensis | BAB32588.1 | AB055807 | Momordica charantia |
| CAA42423.1 | X59751 | Daucus carota | AAA34180.1 | J05094 | Lycopersicon peruvianum |
| AAG11418.1 | AF292108 | Prunus avium | AAA34198.1 | M59427 | Lycopersicon peruvianum |
| AAA92681.1 | U13882 | Pisum sativum | CAB61327.1 | AJ132473 | Amaranthus hypochondriacus |
| AAB46588.1 | U83402 | Capsicum annuum | AAA60745.1 | J04099 | Lycopersicon esculentum |
| AAA33706.1 | M80836 | Petunia x hybrida | CAA47461.1 | X67076 | Nicotiana tabacum |
| AAF65511.1 | AF108889 | Capsicum annuum | CAA78265.1 | Z12619 | Nicotiana tabacum |
| CAA43143.1 | X60738 | Malus x domestica | CAA47460.1 | X67075 | Nicotiana tabacum |

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|-----------------|----------|---|-----------------|----------|---------------------------|
| AAA34067.1 | M74102 | Nicotiana sylvestris | AAK30005.1 | AY029067 | Rosa hybrid cultivar |
| AAC49603.1 | U30861 | Solanum tuberosum | AAG53979.1 | AF325168 | Nicotiana tabacum |
| BAA02823.1 | D13662 | Nicotiana glauca X Nicotiana langsdorffii | AAG31141.1 | AF305911 | Oryza sativa |
| AAA34199.1 | K03290 | Lycopersicon esculentum | BAB18104.1 | AB042714 | Chlamydomonas reinhardtii |
| AAA34200.1 | M13938 | Lycopersicon esculentum | BAB18105.1 | AB042715 | Chlamydomonas reinhardtii |
| AAA72133.1 | L06985 | Solanum tuberosum | CAA73067.1 | Y12464 | Sorghum bicolor |
| CAA78259.1 | Z12611 | Solanum tuberosum | CAC09580.1 | AJ298992 | Fagus sylvatica |
| AAA69781.1 | L06606 | Solanum tuberosum | CAA49592.1 | X69971 | Nicotiana tabacum |
| CAA48136.1 | X67950 | Solanum tuberosum | AAF23902.1 | AF194415 | Oryza sativa |
| CAA47907.1 | X67675 | Solanum tuberosum | AAD52659.1 | AF177392 | Oryza sativa |
| CAA57677.1 | X82187 | Zea mays | AAK11734.1 | AY027437 | Arachis hypogaea |
| CAA55588.1 | X78988 | Zea mays | CAA58466.1 | X83440 | Petunia x hybrida |
| CAA49593.1 | X69972 | Zea mays | AAF19402.1 | AF203480 | Lycopersicon esculentum |
| AAA33816.1 | M17108 | Solanum tuberosum | CAA73068.1 | Y12465 | Sorghum bicolor |
| CAA57307.1 | X81647 | Cucurbita maxima | AAF19403.1 | AF203481 | Lycopersicon esculentum |
| CAA57203.1 | X81447 | Cucurbita maxima | CAB61889.1 | AJ251330 | Oryza sativa |
| | | | AAG40580.1 | AF216316 | Oryza sativa |
| | | | AAF61238.1 | AF241166 | Oryza sativa |
| SEQ ID NO. 2195 | | | SEQ ID NO. 2196 | | |
| AAC32599.1 | AF080436 | Oryza sativa | AAB32591.2 | S74753 | Solanum tuberosum |
| CAC09581.1 | AJ298993 | Fagus sylvatica | | | |
| CAC09568.1 | AJ298980 | Fagus sylvatica | | | |
| CAA08997.1 | AJ010093 | Brassica napus | SEQ ID NO. 2209 | | |
| CAC09569.1 | AJ298981 | Fagus sylvatica | CAA09881.1 | AJ011939 | Trifolium repens |
| AAF34436.1 | AF172282 | Oryza sativa | CAA62228.1 | X90695 | Medicago sativa |
| CAA08995.1 | AJ010091 | Brassica napus | CAA71495.1 | Y10469 | Spinacia oleracea |
| CAA08758.1 | AJ009609 | Brassica napus | AAB41812.1 | L36158 | Medicago sativa |
| CAA08757.1 | AJ009608 | Brassica napus | AAF63024.1 | AF244921 | Spinacia oleracea |
| BAA05648.1 | D26601 | Nicotiana tabacum | AAD11483.1 | U51193 | Glycine max |
| AAF67262.1 | AF165186 | Nicotiana tabacum | CAA62226.1 | X90693 | Medicago sativa |
| CAA04261.2 | AJ000728 | Lycopersicon esculentum | CAA62227.1 | X90694 | Medicago sativa |
| AAD46406.1 | AF096250 | Lycopersicon esculentum | BAA77387.1 | AB024437 | Scutellaria baicalensis |
| AAD10056.1 | AF110518 | Lycopersicon esculentum | AAD11484.1 | U51194 | Glycine max |
| AAD10057.1 | AF110519 | Lycopersicon esculentum | BAA07664.1 | D42065 | Nicotiana tabacum |
| AAA34002.1 | M67449 | Glycine max | BAA07663.1 | D42064 | Nicotiana tabacum |
| BAA06731.1 | D31964 | Nicotiana tabacum | AAD11481.1 | U51191 | Glycine max |
| CAA06334.1 | AJ005077 | Lycopersicon esculentum | AAD11482.1 | U51192 | Glycine max |
| BAB32405.1 | AB055514 | Nicotiana tabacum | AAD37427.1 | AF149277 | Phaseolus vulgaris |
| AAG40578.1 | AF216314 | Oryza sativa | AAB41810.1 | L36156 | Medicago sativa |
| CAC24705.1 | AJ302651 | Nicotiana tabacum | AAC98519.1 | AF007211 | Glycine max |
| AAC83393.1 | U83625 | Zea mays | CAB94692.1 | AJ242742 | Ipomoea batatas |

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|-----------------|----------|----------------------------|-----------------|----------|---------------------------------|
| CAC21393.1 | AJ401276 | Zea mays | BAA12737.1 | D85186 | Gentiana triflora |
| CAA59485.1 | X85228 | Triticum aestivum | BAA89008.1 | AB027454 | Petunia x hybrida |
| AAB67737.1 | L77080 | Stylosanthes humilis | AAF61647.1 | AF190634 | Nicotiana tabacum |
| AAC49818.1 | AF014467 | Oryza sativa | CAA59450.1 | X85138 | Lycopersicon esculentum |
| CAA46916.1 | X66125 | Oryza sativa | AAD55985.1 | AF165148 | Petunia x hybrida |
| CAA66037.1 | X97351 | Populus balsamifera subsp. | AAD21086.1 | AF127218 | Forsythia x intermedia |
| trichocarpa | | | AAB48444.1 | U82367 | Solanum tuberosum |
| AAA65637.1 | L13654 | Lycopersicon esculentum | BAA19659.1 | AB002818 | Perilla frutescens |
| AAB41811.1 | L36157 | Medicago sativa | BAA89009.1 | AB027455 | Petunia x hybrida |
| AAF65464.2 | AF247700 | Oryza sativa | AAF17077.1 | AF199453 | Sorghum bicolor |
| AA98491.1 | L36981 | Petroselinum crispum | CAA54614.1 | X77464 | Manihot esculenta |
| CAA62225.1 | X90692 | Medicago sativa | BAA93039.1 | AB033758 | Citrus unshiu |
| CAA39486.1 | X56011 | Triticum aestivum | AAB62270.1 | AF006081 | Solanum berthaultii |
| CAB67121.1 | Y19023 | Lycopersicon esculentum | AAF98390.1 | AF287143 | Brassica napus |
| BAA03644.1 | D14997 | Oryza sativa | CAA54610.1 | X77460 | Manihot esculenta |
| CAA50597.1 | X71593 | Lycopersicon esculentum | BAB41018.1 | AB047091 | Vitis labrusca x Vitis vinifera |
| BAA82306.1 | AB027752 | Nicotiana tabacum | AAB86473.1 | AF028237 | Ipomoea purpurea |
| BAA06335.1 | D30653 | Populus kitakamiensis | AAB81683.1 | AF000372 | Vitis vinifera |
| CAB99487.1 | AJ276227 | Hordeum vulgare | BAB41021.1 | AB047094 | Vitis vinifera |
| BAA01950.1 | D11337 | Vigna angularis | BAB41025.1 | AB047096 | Vitis vinifera |
| BAA07241.1 | D38051 | Populus kitakamiensis | BAB41023.1 | AB047096 | Vitis vinifera |
| AAD37430.1 | AF149280 | Phaseolus vulgaris | BAB41019.1 | AB047092 | Vitis vinifera |
| AAG02215.1 | AF291667 | Pinus sylvestris | AAB81682.1 | AF000371 | Vitis vinifera |
| AAA32972.1 | L36093 | Hordeum vulgare | BAB41017.1 | AB047090 | Vitis labrusca x Vitis vinifera |
| CAA37713.1 | X53675 | Triticum aestivum | SEQ ID NO. 2211 | | |
| AAB02554.1 | L37790 | Stylosanthes humilis | CAA54609.1 | X77459 | Manihot esculenta |
| CAA71488.1 | Y10462 | Spinacia oleracea | CAA54611.1 | X77461 | Manihot esculenta |
| CAA62597.1 | X91172 | Raphanus sativus | CAA54613.1 | X77463 | Manihot esculenta |
| SEQ ID NO. 2210 | | | CAA54612.1 | X77462 | Manihot esculenta |
| CAA54609.1 | X77459 | Manihot esculenta | AAK28303.1 | AF346431 | Nicotiana tabacum |
| CAA54613.1 | X77463 | Manihot esculenta | AAB36653.1 | U32644 | Nicotiana tabacum |
| CAA54611.1 | X77461 | Manihot esculenta | CAB56231.1 | Y18871 | Dortheanthus bellidiformis |
| CAA54612.1 | X77462 | Manihot esculenta | AAB36652.1 | U32643 | Nicotiana tabacum |
| AAB36653.1 | U32644 | Nicotiana tabacum | AAK28304.1 | AF346432 | Nicotiana tabacum |
| CAB56231.1 | Y18871 | Dortheanthus bellidiformis | CAA59450.1 | X85138 | Lycopersicon esculentum |
| AAK28303.1 | AF346431 | Nicotiana tabacum | AAF61647.1 | AF190634 | Nicotiana tabacum |
| AAB36652.1 | U32643 | Nicotiana tabacum | BAA89008.1 | AB027454 | Petunia x hybrida |
| AAK28304.1 | AF346432 | Nicotiana tabacum | BAA36423.1 | AB013598 | Verbena x hybrida |
| AAD04166.1 | AF101972 | Phaseolus lunatus | BAA89009.1 | AB027455 | Petunia x hybrida |
| BAA83484.1 | AB031274 | Scutellaria baicalensis | AAD55985.1 | AF165148 | Petunia x hybrida |

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|-----------------|----------|---------------------------------|-----------------|----------|---------------------------------------|
| BAA93039.1 | AB033758 | Citrus unshu | AAK15844.1 | AY016276 | Paeonia szechuanica |
| AAF17077.1 | AF199453 | Sorghum bicolor | AAK15843.1 | AY016275 | Paeonia suffruticosa subsp. spontanea |
| AAB48444.1 | U82367 | Solanum tuberosum | AAK15841.1 | AY016273 | Paeonia delavayi |
| AAD21086.1 | AF127218 | Forsythia x intermedia | AAK15840.1 | AY016272 | Paeonia delavayi |
| BAA83484.1 | AB031274 | Scutellaria baicalensis | AAK15835.1 | AY016267 | Paeonia lutea |
| CAA54614.1 | X77464 | Manihot esculenta | AAK15834.1 | AY016266 | Paeonia lutea |
| AAD04166.1 | AF101972 | Phaseolus lunatus | AAK15832.1 | AY016264 | Paeonia mairei |
| AAB86473.1 | AF028237 | Ipomoea purpurea | AAK15831.1 | AY016263 | Paeonia mairei |
| BAB41018.1 | AB047091 | Vitis labrusca x Vitis vinifera | AAK15828.1 | AY016260 | Paeonia japonica |
| BAA19659.1 | AB002818 | Perilla frutescens | AAK15827.1 | AY016259 | Paeonia japonica |
| BAA36422.1 | AB013597 | Perilla frutescens | AAK15826.1 | AY016258 | Paeonia japonica |
| AAB62270.1 | AF006081 | Solanum berthaultii | AAK15825.1 | AY016257 | Paeonia obovata |
| AAB81683.1 | AF000372 | Vitis vinifera | AAK15824.1 | AY016256 | Paeonia obovata |
| BAB41025.1 | AB047098 | Vitis vinifera | AAK15822.1 | AY016254 | Paeonia obovata |
| BAB41023.1 | AB047096 | Vitis vinifera | AAK15820.1 | AY016250 | Paeonia tenuifolia |
| BAB41021.1 | AB047094 | Vitis vinifera | AAK15818.1 | AY016248 | Paeonia anomala |
| BAB41019.1 | AB047092 | Vitis vinifera | AAK15837.1 | AY016269 | Paeonia lutea |
| AAB81682.1 | AF000371 | Vitis vinifera | AAK15817.1 | AY016247 | Paeonia anomala |
| SEQ ID NO. 2213 | | | AAK15830.1 | AY016262 | Paeonia mairei |
| AAA33122.1 | M80571 | Cucumis sativus | AAK15845.1 | AY016277 | Paeonia szechuanica |
| BAB17755.1 | AB042401 | Cucurbita moschata | AAK15839.1 | AY016271 | Paeonia delavayi |
| AAF64066.1 | AF251795 | Elaeis guineensis | AAK15836.1 | AY016268 | Paeonia lutea |
| BAB39689.1 | AB049135 | Cucurbita moschata | AAK15846.1 | AY016278 | Paeonia szechuanica |
| BAB39688.1 | AB049134 | Cucurbita moschata | AAK15833.1 | AY016265 | Paeonia lutea |
| BAB17754.1 | AB042400 | Cucurbita moschata | AAK15821.1 | AY016251 | Paeonia tenuifolia |
| CAA41769.1 | X59041 | Plastid Pisum sativum | SEQ ID NO. 2214 | | |
| CAA56159.1 | X79722 | Phaseolus vulgaris | AAD10386.1 | U72255 | Oryza sativa |
| CAA88913.1 | Z49091 | Spinacia oleracea | CAB85903.1 | AJ251646 | Pisum sativum |
| CAB75874.1 | AJ272082 | Elaeis guineensis | AAA90953.1 | U30323 | Triticum aestivum |
| CAA54559.1 | X77370 | Spinacia oleracea | BAA89481.1 | AB029462 | Salix gilgiana |
| AAD38408.1 | AF155815 | Chloroplast Oryza sativa | AAB82772.2 | AF001523 | Musa acuminata |
| CAB44495.1 | AJ242939 | Plastid Oryza sativa | CAA49513.1 | X69887 | Brassica napus |
| CAB45298.2 | AJ242940 | Plastid Oryza sativa | AAF08679.1 | AF004838 | Musa acuminata |
| AAK15854.1 | AY016286 | Paeonia californica | CAA82271.1 | Z28697 | Nicotiana tabacum |
| AAK15853.1 | AY016285 | Paeonia californica | AAD10384.1 | U72253 | Oryza sativa |
| AAK15852.1 | AY016284 | Paeonia californica | CAA30261.1 | X07280 | Nicotiana plumbaginifolia |
| AAK15851.1 | AY016283 | Paeonia californica | AAA51643.1 | M23120 | Nicotiana plumbaginifolia |
| AAK15849.1 | AY016281 | Paeonia rockii | AAA87456.1 | U22147 | Hevea brasiliensis |
| AAK15848.1 | AY016280 | Paeonia rockii | AAA34078.1 | M63634 | Nicotiana plumbaginifolia |
| AAK15847.1 | AY016279 | Paeonia rockii | | | |

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| AAD10385.1 | U72254 | Oryza sativa | AAC49741.1 | U89257 | Lycopersicon esculentum |
| CAB38443.1 | AJ133470 | Hevea brasiliensis | BAB03248.1 | AB037183 | Oryza sativa |
| AAB03501.1 | U41323 | Glycine max | AAF23899.1 | AF193803 | Oryza sativa |
| AAA32939.1 | M62907 | Hordeum vulgare | AAC29516.1 | U77655 | Solanum tuberosum |
| AAD33881.1 | AF141654 | Nicotiana tabacum | BAA97123.1 | AB016265 | Nicotiana sylvestris |
| AAA03617.1 | M80604 | Lycopersicon esculentum | BAA07322.1 | D38124 | Nicotiana tabacum |
| BAA77786.1 | AB027431 | Oryza sativa | BAA76734.1 | AB024575 | Nicotiana tabacum |
| BAA77787.1 | AB027432 | Oryza sativa | AAD45623.1 | AF084185 | Brassica napus |
| CAB91554.1 | AJ277900 | Vitis vinifera | AAG43549.1 | AF211531 | Nicotiana tabacum |
| AAC14399.1 | AF030771 | Hordeum vulgare | AAG43548.1 | AF211530 | Nicotiana tabacum |
| CAA03908.1 | AJ000081 | Citrus sinensis | AAK01089.1 | AF298231 | Hordeum vulgare |
| AAG24921.1 | AF311749 | Hevea brasiliensis | AAG59618.1 | AF239616 | Hordeum vulgare |
| AAA33946.1 | M37753 | Glycine max | SEQ ID NO. 2216 | | |
| AAA63542.1 | M59443 | Nicotiana tabacum | BAA33203.1 | AB001885 | Oryza sativa |
| AAD28732.1 | AF112965 | Triticum aestivum | BAA33201.1 | AB001883 | Oryza sativa |
| AAD10381.1 | U72250 | Oryza sativa | BAA33204.1 | AB001886 | Oryza sativa |
| CAA57255.1 | X81560 | Nicotiana tabacum | BAA33202.1 | AB001884 | Oryza sativa |
| AAD33880.1 | AF141653 | Nicotiana tabacum | AAC99310.1 | AF052585 | Malus x domestica |
| AAB86541.1 | AF030166 | Oryza sativa | AAC35496.1 | AF052690 | Raphanus sativus |
| AAA63539.1 | M60402 | Nicotiana tabacum | AAG27547.1 | AF269128 | Brassica nigra |
| AAA34053.1 | M60464 | Nicotiana tabacum | AAG27546.1 | AF269126 | Brassica nigra |
| AAD10380.1 | U72249 | Oryza sativa | AAC99309.1 | AF052584 | Malus x domestica |
| AAA63540.1 | M60403 | Nicotiana tabacum | AAC27695.1 | AF016010 | Brassica napus |
| SEQ ID NO. 2215 | | | AAC27696.1 | AF016011 | Brassica napus |
| BAA97122.1 | AB016264 | Nicotiana sylvestris | AAC27694.1 | AF016009 | Brassica napus |
| BAA07321.1 | D38123 | Nicotiana tabacum | BAA33206.1 | AB001888 | Oryza sativa |
| AAC50047.1 | U89255 | Lycopersicon esculentum | AAD22518.1 | AF001136 | Pinus radiata |
| BAA07324.1 | D38126 | Nicotiana tabacum | AAG24863.1 | AF300700 | Ipomoea nil |
| AAC62619.1 | AF057373 | Nicotiana tabacum | BAA33200.1 | AB001882 | Oryza sativa |
| CAB96900.1 | AJ251250 | Catharanthus roseus | SEQ ID NO. 2227 | | |
| CAB96899.1 | AJ251249 | Catharanthus roseus | AAA74447.1 | U30896 | Vigna unguiculata |
| BAA87068.1 | AB035270 | Matricaria chamomilla | SEQ ID NO. 2232 | | |
| AAC49740.1 | U89256 | Lycopersicon esculentum | CAA09457.1 | AJ011010 | Cicer arietinum |
| AAB38748.1 | U81157 | Nicotiana tabacum | CAA06309.1 | AJ005042 | Cicer arietinum |
| BAA97124.1 | AB016266 | Nicotiana sylvestris | CAA59162.1 | X84684 | Brassica oleracea |
| BAA07323.1 | D38125 | Nicotiana tabacum | CAA07236.1 | AJ006771 | Cicer arietinum |
| AAG43545.1 | AF211527 | Nicotiana tabacum | AAC25984.1 | AF020390 | Lycopersicon esculentum |
| AAD00708.1 | U91857 | Stylosanthes hamata | AAB61470.1 | AF004812 | Mangifera indica |
| AAF05606.1 | AF190770 | Oryza sativa | | | |
| AAD09248.1 | U91982 | Stylosanthes hamata | | | |

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| CAA10175.1 | AJ012798 | Lycopersicon esculentum | AAF66615.1 | AF142596 | Nicotiana tabacum |
| CAA54525.1 | X77319 | Asparagus officinalis | AAK11566.1 | AF318490 | Lycopersicon hirsutum |
| CAA10173.1 | AJ012796 | Lycopersicon esculentum | AAK11567.1 | AF318491 | Lycopersicon hirsutum |
| AAF70822.1 | AF154421 | Lycopersicon esculentum | CAB51836.1 | AJ243961 | Oryza sativa |
| AAF70821.1 | AF154420 | Lycopersicon esculentum | BAA92836.1 | AB032473 | Brassica oleracea |
| AAF67342.1 | AF229795 | Vigna radiata | SEQ ID NO. 2235 | | |
| CAA10174.1 | AJ012797 | Lycopersicon esculentum | CAB90633.1 | AJ277743 | Fagus sylvatica |
| AAF21626.1 | AF023847 | Lycopersicon esculentum | CAC10358.1 | AJ277086 | Nicotiana tabacum |
| BAB21492.1 | AB046543 | Pyrus pyrifolia | CAC10359.1 | AJ277087 | Nicotiana tabacum |
| CAA10128.1 | AJ012687 | Cicer arietinum | CAC09575.1 | AJ298987 | Fagus sylvatica |
| AAF67341.1 | AF229794 | Vigna radiata | AAD17804.1 | AF092431 | Lotus japonicus |
| AAC77377.1 | AF064786 | Carica papaya | AAC36697.1 | AF075579 | Mesembryanthemum crystallinum |
| CAA10064.1 | AJ012578 | Carica papaya | CAA72341.1 | Y11607 | Medicago sativa |
| AAC28739.1 | AF079874 | Carica papaya | AAC36698.1 | AF075580 | Mesembryanthemum crystallinum |
| AAG12249.1 | AF184080 | Prunus armeniaca | AAD17805.1 | AF092432 | Lotus japonicus |
| CAA06310.1 | AJ005043 | Cicer arietinum | AAG43835.1 | AF213455 | Zea mays |
| AAD45349.1 | AF159124 | Vitis vinifera | AAC36700.1 | AF075582 | Mesembryanthemum crystallinum |
| SEQ ID NO. 2233 | | | AAC36699.1 | AF075581 | Mesembryanthemum crystallinum |
| AAC61805.1 | U28007 | Lycopersicon esculentum | AAC26828.1 | AF075603 | Oryza sativa |
| AAF91337.1 | AF249318 | Glycine max | AB93832.1 | U81960 | Zea mays |
| AAF91336.1 | AF249317 | Glycine max | CAB90634.1 | AJ277744 | Fagus sylvatica |
| AAG16628.1 | AY007545 | Brassica napus | AAD11430.1 | AF097667 | Mesembryanthemum crystallinum |
| AAC27894.1 | AF023164 | Zea mays | AAC35951.1 | AF079355 | Mesembryanthemum crystallinum |
| BAA94509.1 | AB041503 | Populus nigra | CAC09576.1 | AJ298988 | Fagus sylvatica |
| AAK21965.1 | AY028699 | Brassica napus | SEQ ID NO. 2237 | | |
| AAC27895.1 | AF023165 | Zea mays | BAA83352.1 | AF000391 | Oryza sativa |
| BAA94510.1 | AB041504 | Populus nigra | BAA90508.1 | AF001111 | Oryza sativa |
| AAG03090.1 | AC073405 | Oryza sativa | BAA90507.1 | AF001111 | Oryza sativa |
| BAA78764.1 | AB023482 | Oryza sativa | BAA94511.1 | AB041505 | Populus nigra |
| AAG25966.1 | AF302082 | Nicotiana tabacum | CAA94437.1 | Z70524 | Spirodela polyrrhiza |
| AAF43496.1 | AF131222 | Lophopyrum elongatum | SEQ ID NO. 2240 | | |
| AAK11674.1 | AF339747 | Lophopyrum elongatum | CAA63101.1 | X92204 | Petunia x hybrida |
| AB009771.1 | U67422 | Zea mays | CAA63102.2 | X92205 | Petunia x hybrida |
| CAA97692.1 | Z73295 | Catharanthus roseus | BAA84803.1 | AF000559 | Oryza sativa |
| AAB47421.1 | U59316 | Lycopersicon esculentum | BAB03447.1 | AF002817 | Oryza sativa |
| AAF76313.1 | AF220603 | Lycopersicon esculentum | BAA92400.1 | AF001366 | Oryza sativa |
| CAB51834.1 | 00069 | Oryza sativa | SEQ ID NO. 2241 | | |
| AAB47423.1 | U59315 | Lycopersicon pimpinellifolium | | | |
| AAF76306.1 | AF220602 | Lycopersicon pimpinellifolium | | | |
| AAC48914.1 | U02271 | Lycopersicon pimpinellifolium | | | |

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| CAA78386.1 | Z13996 | Petunia x hybrida | CAB40189.1 | AJ133638 | Avena sativa |
| CAB43399.1 | AJ006292 | Antirrhinum majus | BAA81736.1 | AB029165 | Glycine max |
| CAA67600.1 | X99210 | Lycopersicon esculentum | AAK19615.1 | AF336282 | Gossypium hirsutum |
| AAE22256.1 | AF161711 | Pimpinella brachycarpa | AAK19617.1 | AF336284 | Gossypium hirsutum |
| CAA64614.1 | X95296 | Lycopersicon esculentum | BAA81733.2 | AB029162 | Glycine max |
| CAA78387.1 | Z13997 | Petunia x hybrida | CAA67575.1 | X99134 | Lycopersicon esculentum |
| BAA88222.1 | AB028650 | Nicotiana tabacum | CAA78388.1 | Z13998 | Petunia x hybrida |
| BAA88221.1 | AB028649 | Nicotiana tabacum | BAA23339.1 | D88619 | Oryza sativa |
| BAA88224.1 | AB028652 | Nicotiana tabacum | CAA72186.1 | Y11351 | Oryza sativa |
| AAB41101.1 | U72762 | Nicotiana tabacum | CAA72187.1 | Y11352 | Oryza sativa |
| CAA67575.1 | X99134 | Lycopersicon esculentum | CAA72218.1 | Y11415 | Oryza sativa |
| BAA88223.1 | AB028651 | Nicotiana tabacum | AAK19619.1 | AF336286 | Gossypium hirsutum |
| CAA66952.1 | X98308 | Lycopersicon esculentum | CAA65525.1 | X96749 | Oryza sativa |
| AAA33500.1 | M73028 | Zea mays | SEQ ID NO. 2244 | | |
| AAG36774.1 | AF210616 | Zea mays | CAA33903.1 | X15894 | Sinapis alba |
| | | | CAA34459.1 | X16436 | Sinapis alba |
| SEQ ID NO. 2242 | | | AAB87573.1 | AF034631 | Panax ginseng |
| CAC19439.1 | AJ237661 | Oryza sativa | BAA25391.1 | AB012637 | Nicotiana sylvestris |
| BAB40790.1 | AB058642 | Lilium hybrid division I | AAA34147.1 | M14443 | Lycopersicon esculentum |
| CAA71992.1 | Y11105 | Pisum sativum | AAA80589.1 | U20983 | Solanum tuberosum |
| AAK08983.1 | AY026332 | Oryza sativa | CAA32526.1 | X14341 | Plastid Spinacia oleracea |
| BAA81731.1 | AB029160 | Glycine max | AAF26741.1 | AF220527 | Euphorbia esula |
| BAA81730.1 | AB029159 | Glycine max | BAA25390.1 | AB012637 | Nicotiana sylvestris |
| BAA81732.1 | AB029161 | Glycine max | AAA80591.1 | U21111 | Solanum tuberosum |
| BAA88222.1 | AB028650 | Nicotiana tabacum | AAA80593.1 | U21113 | Solanum tuberosum |
| AAF22256.1 | AF161711 | Pimpinella brachycarpa | BAA25389.1 | AB012637 | Nicotiana sylvestris |
| AAK19618.1 | AF336285 | Gossypium hirsutum | AAA33396.1 | M29334 | Lemna gibba |
| AAK19611.1 | AF336278 | Gossypium hirsutum | AAA80594.1 | U21114 | Solanum tuberosum |
| BAA88224.1 | AB028652 | Nicotiana tabacum | BAA25392.1 | AB012638 | Nicotiana sylvestris |
| CAA78387.1 | Z13997 | Petunia x hybrida | AAA50310.1 | I36064 | Prunus persica |
| BAA96421.1 | AB044084 | Triticum aestivum | AAB61236.1 | AF003127 | Mesembryanthemum crystallinum |
| CAA67600.1 | X99210 | Lycopersicon esculentum | BAA25388.1 | AB012636 | Nicotiana sylvestris |
| CAA67000.1 | X98355 | Oryza sativa | AAA34148.1 | M14444 | Lycopersicon esculentum |
| CAA61021.1 | X87690 | Hordeum vulgare | BAA25394.1 | AB012639 | Nicotiana sylvestris |
| AAG22863.1 | AY008692 | Hordeum vulgare | CAA99993.1 | Z75663 | Apium graveolens |
| AAD31395.1 | AF114162 | Lolium temulentum | AAB61237.1 | AF003128 | Mesembryanthemum crystallinum |
| BAA88221.1 | AB028649 | Nicotiana tabacum | BAA25396.1 | AB012641 | Nicotiana sylvestris |
| BAA88223.1 | AB028651 | Nicotiana tabacum | AAA80592.1 | U21112 | Solanum tuberosum |
| AAB41101.1 | U72762 | Nicotiana tabacum | AAA18529.1 | L07119 | Chloroplast Gossypium hirsutum |
| CAA66952.1 | X98308 | Lycopersicon esculentum | AAB61238.1 | AF003129 | Mesembryanthemum crystallinum |
| CAA64614.1 | X95296 | Lycopersicon esculentum | | | |

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| BAA03104.1 | D14002 | Lactuca sativa | SEQ ID NO. 2250 | Lycopersicon esculentum |
| BAA25395.1 | AB012640 | Nicotiana sylvestris | CAB42052.1 | Hordeum vulgare |
| AAA00688.1 | U39475 | Glycine max | AAD32651.1 | Oryza sativa |
| AAA50172.1 | U01964 | Glycine max | BAB17824.1 | Hordeum vulgare |
| CAA41187.1 | X58229 | Nicotiana tabacum | AAD32650.1 | Hordeum vulgare |
| BAA25393.1 | AB012638 | Nicotiana sylvestris | BAA74583.1 | Hordeum vulgare |
| CAA39376.1 | X55892 | Zea mays | BAA74586.1 | Hordeum vulgare |
| AAC25775.1 | AF072931 | Medicago sativa | BAA74587.1 | Hordeum vulgare |
| CAA32900.1 | X14794 | Zea mays | BAB17826.1 | Oryza sativa |
| AAA34055.1 | M21397 | Nicotiana plumbaginifolia | BAB17823.1 | Oryza sativa |
| CAA10284.1 | AJ131044 | Cicer arietinum | BAB17825.1 | Oryza sativa |
| BAA24493.1 | AB006081 | Fagus crenata | BAA74588.2 | Oryza sativa |
| CAA31419.1 | X12981 | Glycine max | BAA74580.1 | Hordeum vulgare |
| CAA32109.1 | X13909 | Oryza sativa | BAA74585.1 | Hordeum vulgare |
| AAB18209.1 | U73218 | Triticum aestivum | BAA74584.1 | Hordeum vulgare |
| AAF89207.1 | AF279250 | Vigna radiata | SEQ ID NO. 2251 | Nicotiana sylvestris |
| AAA34056.1 | M21398 | Nicotiana plumbaginifolia | AAB96830.1 | Nicotiana sylvestris |
| AAF89206.1 | AF279249 | Vigna radiata | AAB48944.1 | Lycopersicon esculentum |
| SEQ ID NO. 2245 | | | AAD25160.1 | Vicia faba |
| AAB03108.1 | U55032 | Brassica napus | CAA70778.1 | Lycopersicon esculentum |
| BAB20972.1 | AB045894 | Nepenthes alata | AAD25162.1 | Lycopersicon esculentum |
| BAB20969.1 | AB045891 | Nepenthes alata | AAD25161.1 | Atriplex hortensis |
| CAA39602.1 | X56136 | Hordeum vulgare | AAF76897.1 | Solanum tuberosum |
| BAA06875.1 | D32144 | Oryza sativa | CAA70969.1 | Nepenthes alata |
| BAA06876.1 | D32165 | Oryza sativa | AAD16014.1 | Solanum tuberosum |
| BAA76870.1 | AB025359 | Helianthus annuus | CAA70968.1 | Nepenthes alata |
| BAB20970.1 | AB045892 | Nepenthes alata | AAD16015.1 | Nepenthes alata |
| AAB03843.1 | U61396 | Vigna unguiculata | AAF15946.1 | Vicia faba |
| BAA96578.1 | AP002480 | Oryza sativa | AAF15944.1 | Vicia faba |
| CAA70340.1 | Y09123 | Centaurea calcitrapa | AAD16013.1 | Nepenthes alata |
| BAB20971.1 | AB045893 | Nepenthes alata | SEQ ID NO. 2254 | Oryza sativa |
| BAA19607.1 | AB002695 | Cucurbita pepo | BAA85398.1 | Apium graveolens var. dulce |
| BAA02242.1 | D12777 | Oryza sativa | AAG43998.1 | Nicotiana tabacum |
| BAA96446.1 | AB021787 | Pyrus pyrifolia | AAF74566.1 | Solanum tuberosum |
| BAB20973.1 | AB045895 | Nepenthes alata | AAF74567.1 | Zea mays |
| BAA76427.1 | AB024999 | Cicer arietinum | AAF74568.1 | Spinacia oleracea |
| BAA78908.1 | AB028888 | Oryza sativa | AAF74565.1 | Chlorella kessleri |
| AAB03109.1 | U55033 | Brassica napus | CAA53192.1 | Chlorella kessleri |
| BAA22813.1 | D26015 | Nicotiana tabacum | CAA39036.1 | |

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| CAA68813.1 | Y07520 | Chlorella kessleri | CAA64789.1 | X95542 | Cryptomeria japonica |
| CAB06079.1 | Z83829 | Picea abies | CAA64793.1 | X95546 | Metasequoia glyptostroboides |
| CAB52689.1 | AJ132224 | Lycopersicon esculentum | CAA64792.1 | X95545 | Metasequoia glyptostroboides |
| CAA09419.1 | AJ010942 | Lycopersicon esculentum | CAA64790.1 | X95543 | Cryptomeria japonica |
| CAA47324.1 | X66856 | Nicotiana tabacum | SEQ ID NO. 2256 | | |
| BAB19863.1 | AB052884 | Oryza sativa | AAA33945.1 | J03919 | Glycine max |
| AAD55054.1 | AF173655 | Beta vulgaris | CAA48297.1 | X68215 | Pisum sativum |
| CAB07812.1 | Z93775 | Vicia faba | CAA48298.1 | X68216 | Pisum sativum |
| AAB06594.1 | U38651 | Medicago truncatula | AAD50278.1 | AF169830 | Glycine max |
| BAB19864.1 | AB052885 | Oryza sativa | AAA33944.1 | J03920 | Glycine max |
| AAA79761.1 | L08196 | Ricinus communis | CAA48300.1 | X68218 | Pisum sativum |
| CAB52688.1 | AJ132223 | Lycopersicon esculentum | CAA48299.1 | X68217 | Pisum sativum |
| CAB52690.1 | AJ132225 | Lycopersicon esculentum | CAB61882.1 | AJ249996 | Lycopersicon esculentum |
| CAA04511.1 | AJ001061 | Vitis vinifera | SEQ ID NO. 2257 | | |
| CAA70777.1 | Y09590 | Vitis vinifera | CAA09852.1 | AJ011892 | Nicotiana tabacum |
| BAB19862.1 | AB052883 | Oryza sativa | CAA71244.1 | Y10162 | Chenopodium rubrum |
| AAB82147.1 | AF022874 | Lycopersicon esculentum | CAA09854.1 | AJ011894 | Nicotiana tabacum |
| SEQ ID NO. 2255 | | | CAA61334.1 | X88864 | Medicago sativa |
| AAA32989.1 | J05233 | Brassica napus | CAB40540.1 | AJ132929 | Medicago sativa |
| AAK07609.1 | AF319771 | Brassica napus | CAB51788.1 | AJ245415 | Lycopersicon esculentum |
| CAA42478.1 | X59808 | Raphanus sativus | CAB60836.1 | AJ002588 | Lycopersicon esculentum |
| CAA41984.1 | X59294 | Brassica napus | BAA33153.1 | AB008188 | Pisum sativum |
| AAA32988.1 | M16860 | Brassica napus | CAB60837.1 | AJ002589 | Lycopersicon esculentum |
| CAA32692.1 | X14555 | Brassica napus | CAB61222.1 | AJ250397 | Lycopersicon esculentum |
| CAA41985.1 | X59295 | Brassica napus | CAA09853.1 | AJ011893 | Antirrhinum majus |
| CAA40980.1 | X57850 | Brassica napus | CAB61221.1 | AJ250396 | Nicotiana tabacum |
| CAA57633.1 | X82121 | Amaranthus hypochondriacus | CAB61223.1 | AJ250398 | Antirrhinum majus |
| CAA42472.1 | X59802 | Raphanus sativus | CAB60838.1 | AJ002590 | Lycopersicon esculentum |
| AAC61881.1 | U64443 | Coffea arabica | CAB40541.1 | AJ132930 | Medicago sativa |
| AAC61983.1 | AF054895 | Coffea arabica | CAA09769.1 | AJ011776 | Chenopodium rubrum |
| CAA76573.1 | Y16976 | Coffea arabica | BAA86629.1 | AB024987 | Oryza sativa |
| AAK15087.1 | AF240004 | Sesamum indicum | CAB46642.1 | AJ243452 | Lycopersicon esculentum |
| CAA42473.1 | X59803 | Raphanus sativus | CAA57555.1 | X82035 | Oryza sativa |
| AAD32713.1 | AF152003 | Fagopyrum esculentum | CAA63541.1 | X92965 | Nicotiana tabacum |
| CAA35631.1 | X17637 | Avena sativa | CAA63542.1 | X92966 | Nicotiana tabacum |
| CAA42475.1 | X59805 | Raphanus sativus | CAA63543.1 | X92967 | Nicotiana tabacum |
| CAA54152.1 | X76737 | Avena sativa | CAB46643.1 | AJ243453 | Lycopersicon esculentum |
| AAA33374.1 | M28832 | Helianthus annuus | CAB46641.1 | AJ243451 | Lycopersicon esculentum |
| CAA42477.1 | X59807 | Raphanus sativus | CAA57556.1 | X82036 | Oryza sativa |
| AAF73008.1 | AF262999 | Ricinus communis | | | |

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| D50869 | BAA09465.1 | Glycine max |
| U50064 | RAAC50013.1 | Zea mays |
| U10076 | AAA20236.1 | Zea mays |
| AP002481 | BAA96590.1 | Oryza sativa |
| AB024986 | BAA86628.1 | Oryza sativa |
| AJ133722 | CAB77269.1 | Pisum sativum |
| U10077 | AAA20237.1 | Zea mays |
| X68741 | CAA48675.1 | Medicago sativa |
| X78504 | CRA55272.1 | Medicago sativa |
| AJ243454 | CAB46644.1 | Lycopersicon esculentum |
| X62819 | CAA44631.1 | Daucus carota |
| D50871 | BAA09467.1 | Glycine max |
| D89636 | BAA20426.1 | Nicotiana tabacum |
| X92964 | CAA63540.1 | Nicotiana tabacum |
| D50870 | BAA09466.1 | Glycine max |
| D86385 | BAA20410.1 | Catharanthus roseus |
| AJ243455 | CAB46645.1 | Lycopersicon esculentum |
| Y10161 | CAA71243.1 | Chenopodium rubrum |
| D82349 | BAA11560.1 | Adiantum capillus-veneris |
| SEQ ID NO. | 2258 | |
| AAA86687.1 | U15777 | Lupinus albus |
| AAA87729.1 | U20771 | Lupinus albus |
| CAA72793.1 | Y12072 | Gossypium arboreum |
| BAB40665.1 | AB053486 | Humulus lupulus |
| BAB40666.1 | AB053487 | Humulus lupulus |
| CAA57893.1 | X82543 | Parthenium argentatum |
| AAC78557.1 | AF019892 | Helianthus annuus |
| CAA57892.1 | X82542 | Parthenium argentatum |
| AAC49452.1 | U36376 | Artemisia annua |
| CAA59170.1 | X84695 | Capsicum annum |
| AAC73051.1 | AF048747 | Lycopersicon esculentum |
| AAD17204.1 | AF112881 | Artemisia annua |
| BAA19856.1 | D85317 | Oryza sativa |
| BAA36276.1 | AB021747 | Oryza sativa |
| AAD32648.1 | AF136602 | Artemisia annua |
| BAA36347.1 | AB021979 | Oryza sativa |
| AAD37789.1 | AF149257 | Artemisia annua |
| AAD45122.1 | AF164026 | Xanthoceras sorbifolium |
| AAB93951.1 | U97330 | Nicotiana tabacum |
| AAB93984.1 | AF005201 | Parthenium argentatum |
| SEQ ID NO. | 2260 | |
| BAA05648.1 | D26601 | Nicotiana tabacum |
| CAA08997.1 | AJ010093 | Brassica napus |
| CAA08995.1 | AJ010091 | Brassica napus |
| AAF34436.1 | AF172282 | Oryza sativa |
| CAA08758.1 | AJ009609 | Brassica napus |
| CAA08757.1 | AJ009608 | Brassica napus |
| AAC83393.1 | U83625 | Zea mays |
| AAG53979.1 | AF325168 | Nicotiana tabacum |
| AAG40578.1 | AF216314 | Oryza sativa |
| CAA04261.2 | AJ000728 | Lycopersicon esculentum |
| AAF67262.1 | AF165186 | Nicotiana tabacum |
| BAB32405.1 | AB055514 | Nicotiana tabacum |
| AAF19403.1 | AF203481 | Lycopersicon esculentum |
| AAF19402.1 | AF203480 | Lycopersicon esculentum |
| CAC24705.1 | AJ302651 | Nicotiana tabacum |
| BAA06731.1 | D31964 | Nicotiana tabacum |
| AAG31141.1 | AF305911 | Oryza sativa |
| AAF19401.1 | AF203479 | Glycine max |
| AAD46406.1 | AF096250 | Lycopersicon esculentum |
| BAA05649.1 | D26602 | Nicotiana tabacum |
| AAD23582.1 | AF128443 | Glycine max |
| CAA06334.1 | AJ005077 | Lycopersicon esculentum |
| AAD10057.1 | AF110519 | Lycopersicon esculentum |
| AAC78558.1 | AF030879 | Solanum tuberosum |
| AAD10056.1 | AF110518 | Lycopersicon esculentum |
| AAG31142.1 | AF305912 | Hordeum vulgare |
| AAC24961.1 | AF009337 | Tradescantia virginiana |
| AAA61682.1 | I27484 | Zea mays |
| AAC25423.1 | AF072908 | Nicotiana tabacum |
| CAA71142.1 | Y10036 | Cucumis sativus |
| BAA83689.1 | AB011968 | Oryza sativa |
| CAA46554.1 | X65604 | Hordeum vulgare |
| CAA46556.1 | X65606 | Hordeum vulgare |
| CAA65500.1 | X96723 | Medicago sativa |
| AAF05112.1 | AF158091 | Mesembryanthemum crystallinum |
| AAD17800.1 | AF090835 | Mesembryanthemum crystallinum |
| CAA07813.1 | AJ007990 | Hordeum vulgare |
| SEQ ID NO. | 2262 | |

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| AAAD16138.1 | AF096298 | Nicotiana tabacum | BAA84072.1 | AB028152 | Torenia hybrida |
| AAF61864.1 | AF193771 | Nicotiana tabacum | BAA74466.1 | AB022733 | Glycyrrhiza echinata |
| BAA87069.1 | AB035271 | Matricaria chamomilla | BAA22423.1 | AB001380 | Glycyrrhiza echinata |
| AAF61863.1 | AF193770 | Nicotiana tabacum | BAA22894.1 | AB006790 | Petunia x hybrida |
| SEQ ID NO. 2276 | | | AAC32274.1 | AF081575 | Petunia x hybrida |
| BAA7043.1 | AB035183 | Ipomoea batatas | CAB56743.1 | AJ249801 | Cicer arietinum |
| CAB11466.1 | Z98758 | Dianthus caryophyllus | BAA84071.1 | AB028151 | Antirrhinum majus |
| CAB06429.1 | Z84385 | Dianthus caryophyllus | SEQ ID NO. 2279 | | |
| CAB06427.1 | Z84383 | Dianthus caryophyllus | AAD16139.1 | AF096299 | Nicotiana tabacum |
| CAB06430.1 | Z84386 | Dianthus caryophyllus | AAC37515.1 | L44134 | Cucumis sativus |
| CAB06538.1 | Z84571 | Dianthus caryophyllus | CAA88326.1 | Z48429 | Avena fatua |
| CAB06428.1 | Z84384 | Dianthus caryophyllus | AAC49527.1 | U48831 | Petroselinum crispum |
| SEQ ID NO. 2277 | | | AAD16138.1 | AF096298 | Nicotiana tabacum |
| CAA67291.1 | X98739 | Pisum sativum | AAC49529.1 | U58540 | Petroselinum crispum |
| CAA67290.1 | X98738 | Pisum sativum | CAA88331.1 | Z48431 | Avena fatua |
| SEQ ID NO. 2278 | | | BAA77358.1 | AB020023 | Nicotiana tabacum |
| BAA22422.1 | AB001379 | Glycyrrhiza echinata | AAC49528.1 | U56834 | Petroselinum crispum |
| BAA74465.1 | AB022732 | Glycyrrhiza echinata | CAB66338.1 | AJ279697 | Betula pendula |
| BAA93634.1 | AB025016 | Lotus japonicus | AAD27591.1 | AF121354 | Petroselinum crispum |
| CAB43505.1 | AJ239051 | Cicer arietinum | AAF61864.1 | AF193771 | Nicotiana tabacum |
| CAB41490.1 | AJ238439 | Cicer arietinum | AAF61863.1 | AF193770 | Nicotiana tabacum |
| CAA10067.1 | AJ012581 | Cicer arietinum | SEQ ID NO. 2280 | | |
| CAA04117.1 | AJ000478 | Helianthus tuberosus | BAB19757.1 | AB052785 | Glycine max |
| CAA04116.1 | AJ000477 | Helianthus tuberosus | BAB19756.1 | AB052784 | Glycine max |
| AAB94590.1 | AF022461 | Glycine max | BAB19760.1 | AB052788 | Glycine max |
| CAB56742.1 | AJ249800 | Cicer arietinum | AAC32034.1 | AF023472 | Hordeum vulgare |
| AAD56282.1 | AF155332 | Petunia x hybrida | AAD01600.1 | AF016713 | Lycopersicon esculentum |
| AAG09208.1 | AF175278 | Pisum sativum | CAA93316.1 | Z69370 | Cucumis sativus |
| AAC49188.2 | U29333 | Pisum sativum | AAF20002.1 | AF213936 | Prunus dulcis |
| BAA12159.1 | D83968 | Glycine max | AAF07875.1 | AF140606 | Oryza sativa |
| AAC39454.1 | AF014802 | Eschscholzia californica | CAC07206.1 | AJ278966 | Brassica napus |
| CAA65580.1 | X96784 | Nicotiana tabacum | AAB69642.1 | AF000392 | Lotus japonicus |
| BAA13076.1 | D86351 | Glycine max | AAD16016.1 | AF080545 | Nepenthes alata |
| AAA32913.1 | M32885 | Persea americana | AAD42860.1 | AF154930 | Prunus dulcis |
| AAG44132.1 | AF218296 | Pisum sativum | SEQ ID NO. 2282 | | |
| CAA64635.1 | X95342 | Nicotiana tabacum | CAA56851.1 | X80888 | Chlamydomonas reinhardtii |
| AAB94587.1 | AF022458 | Glycine max | CAA55398.1 | X78821 | Chlamydomonas reinhardtii |
| AAD38930.1 | AF135485 | Glycine max | CAA44209.1 | X62335 | Chlamydomonas reinhardtii |

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|-----------------|----------|--------------------------------|-----------------|----------|--------------------------------|-----------------|----------|--------------------------------|-----------------|----------|--------------------------------|
| AAAC49358.1 | U35831 | Pisum sativum | AAAC49358.1 | U35831 | Pisum sativum | AAAC49358.1 | U35831 | Pisum sativum | AAAC49358.1 | U35831 | Pisum sativum |
| CAA5390.1 | X76269 | Pisum sativum | CAA5390.1 | X76269 | Pisum sativum | CAA5390.1 | X76269 | Pisum sativum | CAA5390.1 | X76269 | Pisum sativum |
| CAA35826.1 | X51462 | Spinacia oleracea | CAA35826.1 | X51462 | Spinacia oleracea | CAA35826.1 | X51462 | Spinacia oleracea | CAA35826.1 | X51462 | Spinacia oleracea |
| CAA35827.1 | X51463 | Spinacia oleracea | CAA35827.1 | X51463 | Spinacia oleracea | CAA35827.1 | X51463 | Spinacia oleracea | CAA35827.1 | X51463 | Spinacia oleracea |
| CAA06736.1 | AJ005841 | Oryza sativa | CAA06736.1 | AJ005841 | Oryza sativa | CAA06736.1 | AJ005841 | Oryza sativa | CAA06736.1 | AJ005841 | Oryza sativa |
| CAA06735.1 | AJ005840 | Triticum aestivum | CAA06735.1 | AJ005840 | Triticum aestivum | CAA06735.1 | AJ005840 | Triticum aestivum | CAA06735.1 | AJ005840 | Triticum aestivum |
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| CAA41415.1 | X58527 | Nicotiana tabacum | CAA41415.1 | X58527 | Nicotiana tabacum | CAA41415.1 | X58527 | Nicotiana tabacum | CAA41415.1 | X58527 | Nicotiana tabacum |
| AAC32111.1 | AF051206 | Picea mariana | AAC32111.1 | AF051206 | Picea mariana | AAC32111.1 | AF051206 | Picea mariana | AAC32111.1 | AF051206 | Picea mariana |
| CAA94534.1 | Z70677 | Ricinus communis | CAA94534.1 | Z70677 | Ricinus communis | CAA94534.1 | Z70677 | Ricinus communis | CAA94534.1 | Z70677 | Ricinus communis |
| BAA05546.1 | D26547 | Oryza sativa | BAA05546.1 | D26547 | Oryza sativa | BAA05546.1 | D26547 | Oryza sativa | BAA05546.1 | D26547 | Oryza sativa |
| AAB51522.1 | U92541 | Oryza sativa | AAB51522.1 | U92541 | Oryza sativa | AAB51522.1 | U92541 | Oryza sativa | AAB51522.1 | U92541 | Oryza sativa |
| AAF88067.1 | AF286593 | Triticum aestivum | AAF88067.1 | AF286593 | Triticum aestivum | AAF88067.1 | AF286593 | Triticum aestivum | AAF88067.1 | AF286593 | Triticum aestivum |
| BAA04864.1 | D21836 | Oryza sativa | BAA04864.1 | D21836 | Oryza sativa | BAA04864.1 | D21836 | Oryza sativa | BAA04864.1 | D21836 | Oryza sativa |
| BAA13524.1 | D87984 | Fagopyrum esculentum | BAA13524.1 | D87984 | Fagopyrum esculentum | BAA13524.1 | D87984 | Fagopyrum esculentum | BAA13524.1 | D87984 | Fagopyrum esculentum |
| CAA05081.1 | AJ001903 | Triticum turgidum subsp. durum | CAA05081.1 | AJ001903 | Triticum turgidum subsp. durum | CAA05081.1 | AJ001903 | Triticum turgidum subsp. durum | CAA05081.1 | AJ001903 | Triticum turgidum subsp. durum |
| BAB20886.1 | AB053294 | Oryza sativa | BAB20886.1 | AB053294 | Oryza sativa | BAB20886.1 | AB053294 | Oryza sativa | BAB20886.1 | AB053294 | Oryza sativa |
| CAA56850.1 | X80887 | Chlamydomonas reinhardtii | CAA56850.1 | X80887 | Chlamydomonas reinhardtii | CAA56850.1 | X80887 | Chlamydomonas reinhardtii | CAA56850.1 | X80887 | Chlamydomonas reinhardtii |
| CAA55399.1 | X78822 | Chlamydomonas reinhardtii | CAA55399.1 | X78822 | Chlamydomonas reinhardtii | CAA55399.1 | X78822 | Chlamydomonas reinhardtii | CAA55399.1 | X78822 | Chlamydomonas reinhardtii |
| CAA19392.1 | AF069314 | Mesembryanthemum crystallinum | CAA19392.1 | AF069314 | Mesembryanthemum crystallinum | CAA19392.1 | AF069314 | Mesembryanthemum crystallinum | CAA19392.1 | AF069314 | Mesembryanthemum crystallinum |
| CAA77847.1 | Z11803 | Nicotiana tabacum | CAA77847.1 | Z11803 | Nicotiana tabacum | CAA77847.1 | Z11803 | Nicotiana tabacum | CAA77847.1 | Z11803 | Nicotiana tabacum |
| BAA25681.1 | AB010434 | Brassica rapa | BAA25681.1 | AB010434 | Brassica rapa | BAA25681.1 | AB010434 | Brassica rapa | BAA25681.1 | AB010434 | Brassica rapa |
| AAB53694.1 | U59379 | Brassica napus | AAB53694.1 | U59379 | Brassica napus | AAB53694.1 | U59379 | Brassica napus | AAB53694.1 | U59379 | Brassica napus |
| AAG35777.1 | AF273844 | Brassica oleracea var. | AAG35777.1 | AF273844 | Brassica oleracea var. | AAG35777.1 | AF273844 | Brassica oleracea var. | AAG35777.1 | AF273844 | Brassica oleracea var. |
| alboglaba | | | alboglaba | | | alboglaba | | | alboglaba | | |
| AAD33596.1 | AF133127 | Hevea brasiliensis | AAD33596.1 | AF133127 | Hevea brasiliensis | AAD33596.1 | AF133127 | Hevea brasiliensis | AAD33596.1 | AF133127 | Hevea brasiliensis |
| AAD49232.1 | AF159387 | Lolium perenne | AAD49232.1 | AF159387 | Lolium perenne | AAD49232.1 | AF159387 | Lolium perenne | AAD49232.1 | AF159387 | Lolium perenne |
| AAD56954.1 | AF186240 | Secale cereale | AAD56954.1 | AF186240 | Secale cereale | AAD56954.1 | AF186240 | Secale cereale | AAD56954.1 | AF186240 | Secale cereale |
| BAB39913.1 | AP002912 | Oryza sativa | BAB39913.1 | AP002912 | Oryza sativa | BAB39913.1 | AP002912 | Oryza sativa | BAB39913.1 | AP002912 | Oryza sativa |
| AAD49234.1 | AF159389 | Phalaris coarulescens | AAD49234.1 | AF159389 | Phalaris coarulescens | AAD49234.1 | AF159389 | Phalaris coarulescens | AAD49234.1 | AF159389 | Phalaris coarulescens |
| AAD49233.1 | AF159388 | Phalaris coarulescens | AAD49233.1 | AF159388 | Phalaris coarulescens | AAD49233.1 | AF159388 | Phalaris coarulescens | AAD49233.1 | AF159388 | Phalaris coarulescens |
| AAD49230.1 | AF159385 | Hordeum bulbosum | AAD49230.1 | AF159385 | Hordeum bulbosum | AAD49230.1 | AF159385 | Hordeum bulbosum | AAD49230.1 | AF159385 | Hordeum bulbosum |
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| BAA85440.1 | AP000616 | Oryza sativa | BAA85440.1 | AP000616 | Oryza sativa | BAA85440.1 | AP000616 | Oryza sativa | BAA85440.1 | AP000616 | Oryza sativa |
| CAB53493.1 | AJ245900 | Oryza sativa | CAB53493.1 | AJ245900 | Oryza sativa | CAB53493.1 | AJ245900 | Oryza sativa | CAB53493.1 | AJ245900 | Oryza sativa |
| SEQ ID NO. 2285 | | | SEQ ID NO. 2285 | | | SEQ ID NO. 2285 | | | SEQ ID NO. 2285 | | |
| AAD03693.1 | AF084554 | Brassica napus | AAD03693.1 | AF084554 | Brassica napus | AAD03693.1 | AF084554 | Brassica napus | AAD03693.1 | AF084554 | Brassica napus |

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| AAA33667.1 | L07500 | Pisum sativum | BAA03763.1 | D16247 | Nicotiana sylvestris |
| SEQ ID NO. 2294 | | | AAF40306.1 | AF156667 | Vigna radiata |
| CAA71992.1 | Y11105 | Pisum sativum | CAA68193.1 | X99937 | Spinacia oleracea |
| BAB40790.1 | AB058642 | Lilium hybrid division I | AAD20980.1 | AF079782 | Zea mays |
| AAK08983.1 | AY026332 | Oryza sativa | BAA95705.1 | AB042644 | Oryza sativa |
| CAA64615.1 | X95297 | Lycopersicon esculentum | BAA95704.1 | AB042643 | Oryza sativa |
| BAA81730.1 | AB029159 | Glycine max | SEQ ID NO. 2298 | | |
| CAA67600.1 | X99210 | Lycopersicon esculentum | CAA44216.1 | X62343 | Nicotiana tabacum |
| BAA81731.1 | AB029160 | Glycine max | BAA03099.1 | D13991 | Aralia cordata |
| AAF22256.1 | AF161711 | Pimpinella brachycarpa | CAA79622.1 | Z19568 | Populus deltoides |
| AAK19615.1 | AF336282 | Gossypium hirsutum | CAC07423.1 | AJ295837 | Populus balsamifera subsp. |
| CAA78388.1 | Z13998 | Petunia x hybrida | trichocarpa | | |
| BAA88221.1 | AB028649 | Nicotiana tabacum | AAF43140.1 | AF217957 | Populus tremuloides |
| BAA88224.1 | AB028652 | Nicotiana tabacum | CAA44217.1 | X62344 | Nicotiana tabacum |
| BAA81732.1 | AB029161 | Glycine max | CAA79625.1 | Z19573 | Medicago sativa |
| CAA64614.1 | X95296 | Lycopersicon esculentum | AAC35845.1 | AF083332 | Medicago sativa |
| AAK19617.1 | AF336284 | Gossypium hirsutum | AAC07987.1 | AF038561 | Eucalyptus globulus |
| AAK19611.1 | AF336278 | Gossypium hirsutum | CAA46585.1 | X65631 | Eucalyptus gunnii |
| BAA23337.1 | D88617 | Oryza sativa | AAG15553.1 | AF294793 | Eucalyptus saligna |
| CAA78387.1 | Z13997 | Petunia x hybrida | CAA53211.1 | X75480 | Eucalyptus gunnii |
| CAC19439.1 | AJ237661 | Oryza sativa | AAB70908.1 | AF010290 | Iolium perenne |
| AAK19619.1 | AF336286 | Gossypium hirsutum | CAA74070.1 | Y13733 | Zea mays |
| CAB40189.1 | AJ133638 | Avena sativa | CAA06687.1 | AJ005702 | Zea mays |
| BAA96421.1 | AB044084 | Triticum aestivum | CAA13177.1 | AJ231135 | Saccharum officinarum |
| BAA88223.1 | AB028651 | Nicotiana tabacum | BAA19487.1 | D86590 | Zinnia elegans |
| AAB41101.1 | U72762 | Nicotiana tabacum | CAA51226.1 | X72675 | Picea abies |
| CAA61021.1 | X87690 | Hordeum vulgare | CAA05097.1 | AJ001926 | Picea abies |
| AAG22863.1 | AY008692 | Hordeum vulgare | CAA05096.1 | AJ001925 | Picea abies |
| AAD31395.1 | AF114162 | Lolium temulentum | CAA05095.1 | AJ001924 | Picea abies |
| BAA88222.1 | AB028650 | Nicotiana tabacum | AAB38774.1 | U62394 | Pinus radiata |
| CAA50221.1 | X70876 | Hordeum vulgare | AAC31166.1 | AF060491 | Pinus radiata |
| CAA50222.1 | X70877 | Hordeum vulgare | CAA86073.1 | Z37992 | Pinus taeda |
| CAA50224.1 | X70879 | Hordeum vulgare | CAA86072.1 | Z37991 | Pinus taeda |
| CAA72218.1 | Y11415 | Oryza sativa | BAA04046.1 | D16624 | Eucalyptus botryoides |
| AAG28526.1 | AF198499 | Nicotiana tabacum | AAD10327.1 | U63534 | Fragaria x ananassa |
| BAA81736.1 | AB029165 | Glycine max | AAK28509.1 | AF320110 | Fragaria x ananassa |
| CAA78386.1 | Z13996 | Petunia x hybrida | AAC35846.1 | U79770 | Mesembryanthemum crystallinum |
| SEQ ID NO. 2296 | | | AAK35846.1 | AF083333 | Medicago sativa |
| AAF75791.1 | AF271892 | Pisum sativum | AAA74882.1 | L36823 | Stylosanthes humilis |
| | | | AAF23409.1 | AF207552 | Brassica napus |

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| CAB46350.1 | Y18311 | Solanum tuberosum | CAB46228.1 | Y18055 | Arachis hypogaea |
| SEQ ID NO. 2303 | | | AAF21062.1 | AF216527 | Dunaliella tertiolecta |
| AAG28503.1 | AF196966 | Citrus sinensis | CAA89202.1 | Z49233 | Chlamydomonas eugametos |
| AAF18584.1 | AF118132 | Spinacia oleracea | AAF23900.1 | AF194413 | Oryza sativa |
| AAF18585.1 | AF118133 | Nicotiana tabacum | AAF23901.2 | AF194414 | Oryza sativa |
| AAF14186.1 | AF106068 | Solanum tuberosum | AAC78558.1 | AF030879 | Solanum tuberosum |
| AAG35735.1 | AF208543 | Lycopersicon esculentum | CAA58750.1 | X83869 | Daucus carota |
| CAA63966.1 | X94302 | Solanum tuberosum | AAB47181.1 | S82324 | Zea mays |
| | | | BAA22410.1 | D38452 | Zea mays |
| | | | BAA12691.1 | D84507 | Zea mays |
| | | | BAA12692.1 | D84508 | Zea mays |
| SEQ ID NO. 2304 | | | AAG01179.1 | AF289237 | Zea mays |
| AAB88537.1 | AF035944 | Fragaria x ananassa | AAC24961.1 | AF009337 | Tradescantia virginiana |
| BAA81750.1 | AB017516 | Marchantia polymorpha | BAA90814.1 | AP001168 | Oryza sativa |
| BAA81751.1 | AB017517 | Marchantia polymorpha | AAC32116.1 | AF051211 | Picea mariana |
| BAA81749.1 | AB017515 | Marchantia polymorpha | AAF06970.1 | AF162662 | Kalanchoe fedtschenkoi |
| BAA81748.1 | AB017515 | Marchantia polymorpha | AAF06969.1 | AF162661 | Kalanchoe fedtschenkoi |
| AAD17800.1 | AF090835 | Mesembryanthemum crystallinum | | | |
| BAA12715.1 | D85039 | Zea mays | SEQ ID NO. 2305 | | |
| AAB70706.1 | U82087 | Tortula ruralis | AAB05871.2 | U63784 | Catharanthus roseus |
| AAB49984.1 | U90262 | Cucurbita pepo | CAB65911.1 | AJ249831 | Lemna minor |
| AAC49405.1 | U08140 | Vigna radiata | AAF18999.1 | AF212155 | Allium cepa |
| CAA57157.1 | X81394 | Oryza sativa | AAC26855.1 | AF069951 | Enteromorpha intestinalis |
| AAA69507.1 | U28376 | Zea mays | AAC49896.1 | AF027727 | Chlamydomonas reinhardtii |
| CAA07481.1 | AJ007366 | Zea mays | AAD02069.1 | AF036939 | Chlamydomonas reinhardtii |
| BAA13232.1 | D87042 | Zea mays | | | |
| BAA12338.1 | D84408 | Zea mays | SEQ ID NO. 2313 | | |
| AAB80693.1 | U69174 | Glycine max | CAA73067.1 | Y12464 | Sorghum bicolor |
| AAC25423.1 | AF072908 | Nicotiana tabacum | CAA73068.1 | Y12465 | Sorghum bicolor |
| AAD28192.2 | AF115406 | Solanum tuberosum | AAB62693.1 | AF004947 | Oryza sativa |
| BAA13440.1 | D87707 | Ipomoea batatas | AAF22219.1 | AF141378 | Zea mays |
| CAA65500.1 | X96723 | Medicago sativa | BAA83688.1 | AB011967 | Oryza sativa |
| AAA61682.1 | L27484 | Zea mays | BAA34675.1 | AB011670 | Triticum aestivum |
| AAA33443.1 | L15390 | Zea mays | BAA83689.1 | AB011968 | Oryza sativa |
| BAA85396.1 | AF000615 | Oryza sativa | BAA96628.1 | AP002482 | Oryza sativa |
| AAC05270.1 | AF048691 | Oryza sativa | BAA05649.1 | D26602 | Nicotiana tabacum |
| CAA39936.1 | X56599 | Daucus carota | AAD23582.1 | AF128443 | Glycine max |
| CAA57156.1 | X81393 | Oryza sativa | CAA71142.1 | Y10036 | Cucumis sativus |
| AAB80692.1 | U69173 | Glycine max | CAA57898.1 | X82548 | Hordeum vulgare |
| BAA02698.1 | D13436 | Oryza sativa | AAC99329.1 | AF062479 | Oryza sativa |
| AAG46110.1 | AC073166 | Oryza sativa | CAA65244.1 | X95997 | Solanum tuberosum |
| AAK26164.1 | AY027885 | Cucumis sativus | | | |

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|-----------------|----------|----------------------------|-----------------|----------|---------------------------|
| AAB05457.1 | U55768 | Oryza sativa | AAC13252.1 | AF022012 | Lycopersicon esculentum |
| CAA07813.1 | AJ007990 | Hordeum vulgare | AAC13262.1 | AF022022 | Lycopersicon esculentum |
| CAR46556.1 | X65606 | Hordeum vulgare | AAC13253.1 | AF022013 | Lycopersicon esculentum |
| CAR46554.1 | X65604 | Hordeum vulgare | SEQ ID NO. 2315 | | |
| CAA89202.1 | Z49233 | Chlamydomonas eugametos | BAB19880.1 | AB052887 | Oryza sativa |
| AAD00239.1 | U73938 | Nicotiana tabacum | AAF12877.1 | AF205377 | Chlamydomonas reinhardtii |
| AAB68962.1 | I38855 | Glycine max | AAF27916.1 | AF220199 | Pinus taeda |
| AAF21062.1 | AF216527 | Dunaliella tertiolecta | BAB17626.1 | AB033537 | Oryza sativa |
| AAB58348.1 | U29095 | Triticum aestivum | SEQ ID NO. 2316 | | |
| AAD00240.1 | U73939 | Nicotiana tabacum | AAD00708.1 | U91857 | Stylosanthes hamata |
| BAA13608.1 | D88399 | Oryza sativa | AAC49741.1 | U89257 | Lycopersicon esculentum |
| AAG60195.1 | AC084763 | Oryza sativa | BAB03248.1 | AB037183 | Oryza sativa |
| CAA39936.1 | X56599 | Daucus carota | BAA97123.1 | AB016265 | Nicotiana sylvestris |
| BAA19573.1 | AB002109 | Oryza sativa | AAC29516.1 | U77655 | Solanum tuberosum |
| CAA06503.1 | AJ005373 | Craterostigma plantagineum | BAA76734.1 | AB024575 | Nicotiana tabacum |
| BAA13440.1 | D87707 | Ipomoea batatas | AAB38748.1 | U81157 | Nicotiana tabacum |
| AAB88537.1 | AF035944 | Fragaria x ananassa | BAA97124.1 | AB016266 | Nicotiana sylvestris |
| SEQ ID NO. 2314 | | | SEQ ID NO. 2322 | | |
| AAD32146.1 | AF123508 | Nicotiana tabacum | AAA33376.1 | L36129 | Helianthus annuus |
| AAD32147.1 | AF123509 | Nicotiana tabacum | BAA07108.1 | D37870 | Spinacia oleracea |
| BAA85821.1 | AB026822 | Cucumis sativus | BAA04864.1 | D21836 | Oryza sativa |
| AAD32145.1 | AF123507 | Nicotiana tabacum | BAA05546.1 | D26547 | Oryza sativa |
| AAD32144.1 | AF123506 | Nicotiana tabacum | AAB51522.1 | U92541 | Oryza sativa |
| CAA48297.1 | X68215 | Pisum sativum | BAA36283.1 | D85751 | Oryza sativa |
| AAD32142.1 | AF123504 | Nicotiana tabacum | BAA37092.1 | AB009592 | Oryza sativa |
| BAA85822.1 | AB026823 | Cucumis sativus | CAA06835.1 | AJ006055 | Zea mays |
| CAA48298.1 | X68216 | Pisum sativum | SEQ ID NO. 2326 | | |
| AAD32143.1 | AF123505 | Nicotiana tabacum | AAA83439.1 | U16123 | Zea mays |
| AAC13260.1 | AF022020 | Lycopersicon esculentum | AAA50305.1 | I29099 | Solanum tuberosum |
| AAC13258.1 | AF022018 | Lycopersicon esculentum | AAB48484.1 | U87849 | Capsicum annuum |
| BAA85820.1 | AB026821 | Cucumis sativus | BAA01954.1 | D11350 | Lycopersicon esculentum |
| CAA48300.1 | X68218 | Pisum sativum | CAA47636.1 | X67163 | Daucus carota |
| AAC13261.1 | AF022021 | Lycopersicon esculentum | SEQ ID NO. 2327 | | |
| AAC13255.1 | AF022015 | Lycopersicon esculentum | AAD27878.1 | AF139466 | Vigna radiata |
| AAC13257.1 | AF022017 | Lycopersicon esculentum | AAC14566.1 | AF058796 | Oryza sativa |
| BAA78739.1 | AB023482 | Oryza sativa | CAA90681.1 | Z50801 | Zea mays |
| AAC13259.1 | AF022019 | Lycopersicon esculentum | | | |
| BAA95840.1 | AP002070 | Oryza sativa | | | |
| CAB61882.1 | AJ249996 | Lycopersicon esculentum | | | |
| AAC13254.1 | AF022014 | Lycopersicon esculentum | | | |

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| AAA34140.1 | M17633 | Lycopersicon esculentum | AAB31705.1 | S72358 | Chloroplast Nicotiana |
| CAA45523.1 | X64198 | Nicotiana tabacum | sylvestris | | |
| AAA34186.1 | J03558 | Lycopersicon esculentum | BAA07667.1 | D42070 | Nicotiana sylvestris |
| CAA41405.1 | X58515 | Pinus sylvestris | BAA78581.1 | AU066497 | Chlamydomonas sp. HS-5 |
| CAA41404.1 | X58514 | Pinus sylvestris | SEQ ID NO. 2329 | | |
| AAE23819.1 | AF218305 | Hordeum vulgare | CAA09881.1 | AJ011939 | Trifolium repens |
| AAC67558.1 | AF094776 | Oryza sativa | CAA62228.1 | X90695 | Medicago sativa |
| CAA06961.1 | AJ006296 | Hordeum vulgare | AAB41812.1 | L36158 | Medicago sativa |
| AAG28464.1 | AF195794 | Chlamydomonas reinhardtii | CAA71495.1 | Y10469 | Spinacia oleracea |
| AAF44702.1 | AF241524 | Asarina barclaiana | BAA77387.1 | AB024437 | Scutellaria baicalensis |
| CAA78900.1 | Z16408 | Pinus sylvestris | CAA62226.1 | X90693 | Medicago sativa |
| AAA64414.1 | U23188 | Zea mays | CAB94692.1 | AJ242742 | Ipomoea batatas |
| CAA44777.1 | X63052 | Hordeum vulgare | AAF63024.1 | AF244921 | Spinacia oleracea |
| CAA65042.1 | X95727 | Brassica juncea | CAA62227.1 | X90694 | Medicago sativa |
| AAA64415.1 | U23189 | Zea mays | AAD11483.1 | U51193 | Glycine max |
| CAA43590.1 | X61287 | Lycopersicon esculentum | AAC49818.1 | AF014467 | Oryza sativa |
| AAA50172.1 | U01964 | Glycine max | CAA46916.1 | X66125 | Oryza sativa |
| CAA34459.1 | X16436 | Sinapis alba | CAC21393.1 | AJ401276 | Zea mays |
| AAD27877.1 | AF139465 | Vigna radiata | CAB67121.1 | Y19023 | Lycopersicon esculentum |
| CAA33903.1 | X15894 | Sinapis alba | AAB41811.1 | L36157 | Medicago sativa |
| BAA25390.1 | AB012637 | Nicotiana sylvestris | CAA50597.1 | X71593 | Lycopersicon esculentum |
| BAA00536.1 | D00641 | Oryza sativa | AAC98519.1 | AF007211 | Glycine max |
| CAA99993.1 | Z75663 | Apium graveolens | CAA62225.1 | X90692 | Medicago sativa |
| CAA39883.1 | X56538 | Pisum sativum | CAA66037.1 | X97351 | Populus balsamifera subsp. |
| AAC79711.1 | AF093617 | Acetabularia acetabulum | trichocarpa | | |
| CAA32109.1 | X13909 | Oryza sativa | AAA20473.1 | U12315 | Cenchrus ciliaris |
| CAA32108.1 | X13908 | Oryza sativa | AAA98491.1 | L36981 | Petroselinum crispum |
| AAA68425.1 | M34396 | Polystichum munitum | CAA71488.1 | Y10462 | Spinacia oleracea |
| AAA80594.1 | U21114 | Solanum tuberosum | CAA71490.1 | Y10464 | Spinacia oleracea |
| BAA77273.1 | AB026686 | Physcomitrella patens | BAA03911.1 | D16442 | Oryza sativa |
| CAA10284.1 | AJ131044 | Cicer arietinum | BAA07663.1 | D42064 | Nicotiana tabacum |
| AAF89207.1 | AF279250 | Vigna radiata | AAC49821.1 | AF014470 | Oryza sativa |
| CAA49149.1 | X69215 | Pisum sativum | CAA80502.1 | Z22920 | Spirodela polyrrhiza |
| BAA32346.1 | AB013728 | Cryptomeria japonica | AAD11484.1 | U51194 | Glycine max |
| CAA43804.1 | X61610 | Brassica napus | AAD37430.1 | AF149280 | Phaseolus vulgaris |
| AAB70556.1 | AF017998 | Tetraselmis sp. RG-15 | BAA01950.1 | D11337 | Vigna angularis |
| SEQ ID NO. 2328 | | | CAA59485.1 | X85228 | Triticum aestivum |
| AAB31704.1 | S72356 | Chloroplast Nicotiana | BAA07664.1 | D42065 | Nicotiana tabacum |
| sylvestris | | | AAD37427.1 | AF149277 | Phaseolus vulgaris |
| | | | CAA39486.1 | X56011 | Triticum aestivum |

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| BAA12715.1 | D85039 | Zea mays | CAA55516.1 | X78900 | Beta vulgaris |
| AAA61682.1 | L27484 | Zea mays | CAA65541.1 | X96766 | Pisum sativum |
| CAA57157.1 | X81394 | Oryza sativa | AAC21562.1 | AF068260 | Ipomoea batatas |
| AAA69507.1 | U28376 | Zea mays | CAB52196.1 | AJ252316 | Ipomoea batatas |
| AAD28192.2 | AF115406 | Solanum tuberosum | CAA79980.1 | Z21969 | Triticum aestivum |
| BAA13440.1 | D87707 | Ipomoea batatas | CAA43490.1 | X61187 | Solanum tuberosum |
| CAA39936.1 | X56599 | Daucus carota | AAK27719.1 | AF356003 | Cicer arietinum |
| AAG46110.1 | C073166 | Oryza sativa | CAB55495.1 | AJ249256 | Ipomoea batatas |
| BAA02698.1 | D13436 | Oryza sativa | AAB91468.1 | AF032473 | Citrullus lanatus |
| AAK26164.1 | AY027885 | Cucumis sativus | CAA47626.1 | X67151 | Hordeum vulgare |
| AAB88537.1 | AF035944 | Fragaria x ananassa | BAA23490.1 | D50317 | Oryza sativa |
| AAF21062.1 | AF216527 | Dunaliella tertiolecta | AAC49943.1 | U85497 | Lycopersicon esculentum |
| CAA89202.1 | Z49233 | Chlamydomonas eugametos | AAC49729.1 | U66876 | Hordeum vulgare |
| AAF23900.1 | AF194413 | Oryza sativa | CAB55496.1 | AJ249257 | Ipomoea batatas |
| AAF23901.2 | AF194414 | Oryza sativa | CAA32533.1 | X14350 | Triticum aestivum |
| AAK78558.1 | AF030879 | Solanum tuberosum | AAK27727.1 | AY028314 | Oryza sativa |
| AAC32116.1 | AF051211 | Picea mariana | AAK27685.1 | AF347698 | Brassica rapa subsp. pekinensis |
| CAB46228.1 | Y18055 | Arachis hypogaea | CAA86227.1 | Z38111 | Zea mays |
| CAA58750.1 | X83869 | Daucus carota | AAB94012.1 | AF010283 | Sorghum bicolor |
| BAA12691.1 | D84507 | Zea mays | AAB24191.2 | S48563 | Zea mays |
| AAB47181.1 | S82324 | Zea mays | AAB38781.1 | U66041 | Oryza sativa |
| BAA22410.1 | D38452 | Zea mays | CAA69978.1 | Y08728 | Pisum sativum |
| BAA12692.1 | D84508 | Zea mays | CAB51610.1 | AJ245392 | Ipomoea batatas |
| AAG01179.1 | AF289237 | Tradescantia virginiana | CAA65540.1 | X96765 | Pisum sativum |
| AAC24961.1 | AF009337 | Oryza sativa | CAB89863.1 | AJ271162 | Brassica napus |
| BAA90814.1 | AP001168 | Lilium longiflorum | CAA65539.1 | X96764 | Pisum sativum |
| AAC49008.1 | U24188 | Nicotiana tabacum | CAA54259.1 | X76940 | Vicia faba |
| AAD52098.1 | U70923 | | CAA54260.1 | X76941 | Vicia faba |
| | | | CAB01911.1 | Z79635 | Ipomoea batatas |
| | | | AAB91466.1 | AF032471 | Citrullus lanatus |
| | | | AAK27721.1 | AF356005 | Cicer arietinum |
| SEQ ID NO. 2337 | | | | | |
| AAD56042.1 | AF184598 | Citrus unshiu | SEQ ID NO. 2339 | | |
| AAC49941.1 | U88089 | Lycopersicon esculentum | CAA55641.1 | X79008 | Nicotiana tabacum |
| AAB91467.1 | AF032472 | Citrullus lanatus | CAA55642.1 | X79009 | Nicotiana tabacum |
| CAA52917.1 | X74982 | Solanum tuberosum | CAA43513.1 | X61205 | Nicotiana plumbaginifolia |
| AAB91463.1 | AF030383 | Cucumis melo | CAA55738.1 | X79137 | Nicotiana tabacum |
| AAE66436.1 | AF249917 | Perilla frutescens | CAA55739.1 | X79138 | Nicotiana tabacum |
| AAB91464.1 | AF030384 | Cucumis melo | CAA55742.1 | X79141 | Nicotiana tabacum |
| AAD56405.1 | AF184345 | Lycopersicon hirsutum | CAA55737.1 | X79136 | Nicotiana tabacum |
| AAB40723.1 | U81033 | Lycopersicon esculentum | CAA55736.1 | X79135 | Nicotiana tabacum |
| AAB40724.1 | U81034 | Lycopersicon esculentum | | | |
| AAC49942.1 | U85496 | Lycopersicon esculentum | | | |

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| BAA81732.1 | AB029161 | Glycine max | CAA10608.1 | AJ132228 | Ricinus communis |
| AAK19616.1 | AF336283 | Gossypium hirsutum | SEQ ID NO. 2348 | | |
| AAK19611.1 | AF336278 | Gossypium hirsutum | AAF36491.1 | AF129479 | Hordeum vulgare |
| AAK19617.1 | AF336284 | Gossypium hirsutum | BAB32443.1 | AB055630 | Phragmites australis |
| AAK19615.1 | AF336282 | Gossypium hirsutum | BAB32444.1 | AB055631 | Phragmites australis |
| CAB433399.1 | AJ006292 | Antirrhinum majus | BAB32445.1 | AB055632 | Phragmites australis |
| CAA72185.1 | Y11350 | Oryza sativa | BAB32442.1 | AB055629 | Phragmites australis |
| AAF22256.1 | AF161711 | Pimpinella brachycarpa | AAF36497.1 | AF129485 | Oryza sativa |
| AAG13574.1 | AC037425 | Oryza sativa | AAF36496.1 | AF129484 | Hordeum vulgare |
| BAA81731.1 | AB029160 | Glycine max | AAF36492.1 | AF129480 | Hordeum vulgare |
| BAA81730.1 | AB029159 | Glycine max | CAC15061.1 | AJ300161 | Hordeum vulgare |
| CAA72186.1 | Y11351 | Oryza sativa | | | |
| CAA67600.1 | X99210 | Lycopersicon esculentum | SEQ ID NO. 2349 | | |
| CAA75509.1 | Y15219 | Oryza sativa subsp. indica | AAF40430.1 | AF234652 | Mesembryanthemum crystallinum |
| CAA78387.1 | Z13997 | Petunia x hybrida | AAC04324.1 | U73937 | Nicotiana tabacum |
| BAA81736.1 | AB029165 | Glycine max | BAA19553.1 | D64036 | Oryza sativa |
| AAK19618.1 | AF336285 | Gossypium hirsutum | AAA33479.1 | M60526 | Zea mays |
| AAK72217.1 | Y11414 | Oryza sativa | AAG01534.1 | AF289467 | Nicotiana tabacum |
| AAA33500.1 | M73028 | Zea mays | CAA66233.1 | X97637 | Antirrhinum majus |
| AAG36774.1 | AF210616 | Zea mays | CAA76700.1 | Y17225 | Lycopersicon esculentum |
| BAA88222.1 | AB028650 | Nicotiana tabacum | CAC15504.1 | AJ297917 | Lycopersicon esculentum |
| BAA81733.2 | AB029162 | Glycine max | AAD28617.1 | AF129087 | Medicago sativa |
| BAA23339.1 | D88619 | Oryza sativa | AAC41680.1 | L34206 | Petroselinum crispum |
| BAA88224.1 | AB028652 | Nicotiana tabacum | CAC15503.1 | AJ297916 | Lycopersicon esculentum |
| BAA88221.1 | AB028649 | Nicotiana tabacum | BAA33152.1 | AB008187 | Pisum sativum |
| AAB41101.1 | U72762 | Nicotiana tabacum | CAA50038.1 | X70707 | Medicago sativa |
| | | | BAB18271.1 | AB035141 | Chlamydomonas reinhardtii |
| SEQ ID NO. 2347 | | | CAA76701.1 | Y17226 | Lycopersicon esculentum |
| CAA70968.1 | Y09825 | Solanum tuberosum | CAA71242.1 | Y10160 | Chenopodium rubrum |
| AAF15946.1 | AF061436 | Vicia faba | AAB41548.1 | I07042 | Medicago sativa |
| CAA70969.1 | Y09826 | Solanum tuberosum | CAA73323.1 | Y12785 | Petroselinum crispum |
| AAB96830.1 | U64823 | Nicotiana sylvestris | CAA47099.1 | X66469 | Medicago sativa |
| CAA07563.1 | AJ007574 | Ricinus communis | CAA58761.1 | X83880 | Nicotiana tabacum |
| AAB48944.1 | U31932 | Nicotiana sylvestris | BAA21673.1 | AB006033 | Allium cepa |
| AAD16015.1 | AF080544 | Nepenthes alata | BAA09600.1 | D61377 | Nicotiana tabacum |
| CAA70778.1 | Y09591 | Vicia faba | CAA50036.1 | X70703 | Pisum sativum |
| AAF15944.1 | AF061434 | Vicia faba | AAF81419.1 | AF247135 | Capsicum annuum |
| AAF15945.1 | AF061435 | Vicia faba | AAD37790.1 | AF149424 | Ipomoea batatas |
| AAF76897.1 | AF274032 | Atriplex hortensis | CAA57719.1 | X82268 | Medicago sativa |
| AAD16014.1 | AF080543 | Nepenthes alata | CAA73397.1 | Y13646 | Petunia x hybrida |
| AAD25161.1 | AF014809 | Lycopersicon esculentum | | | |

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| CAA74661.1 | Y14285 | Brassica oleracea | CAA53076.1 | X75327 | Pisum sativum |
| AAA33000.1 | M76647 | Brassica oleracea | AAB33843.1 | S77096 | Brassica napus |
| CAA79355.1 | Z18921 | Brassica oleracea | AAG43027.1 | AF323586 | Oryza sativa |
| CAB41878.1 | Y18259 | Brassica oleracea | AAC49268.1 | U12196 | Sorghum bicolor |
| BAA07576.1 | D38563 | Brassica rapa | AAC49267.1 | U12195 | Sorghum bicolor |
| BAA06285.1 | D30049 | Brassica rapa | SEQ ID NO. 2367 | | |
| BAA21132.1 | D88193 | Brassica rapa | AAB67737.1 | L77080 | Stylosanthes humilis |
| BAA07577.2 | D38564 | Brassica rapa | AAA32676.1 | M37637 | Arachis hypogaea |
| BAA92836.1 | AB032473 | Brassica oleracea | CAA64413.1 | X94943 | Lycopersicon esculentum |
| BAB21001.1 | AB054061 | Brassica rapa | CAA71494.1 | Y10468 | Spinacia oleracea |
| BAA92837.1 | AB032474 | Brassica rapa | BAA82307.1 | AB027753 | Nicotiana tabacum |
| AAD52097.1 | AF088885 | Brassica oleracea | BAA11853.1 | D83225 | Populus nigra |
| AAK21965.1 | AY028699 | Nicotiana tabacum | AAC05277.1 | AF049881 | Linum usitatissimum |
| AAA33915.1 | L27821 | Brassica napus | CAA80502.1 | Z22920 | Spirodela polyrrhiza |
| BAA94529.2 | AP001800 | Oryza sativa | BAA08499.1 | D49551 | Oryza sativa |
| AAF34428.1 | AF172282 | Oryza sativa | CAA66034.1 | X97348 | Populus balsamifera subsp. |
| AAG03090.1 | AC073405 | Oryza sativa | trichocarpa | | |
| BAA94516.1 | AP001800 | Oryza sativa | AAD37430.1 | AF149280 | Phaseolus vulgaris |
| SEQ ID NO. 2364 | | | CAB94692.1 | AJ242742 | Ipomoea batatas |
| AAC03055.1 | AF045770 | Oryza sativa | AAD37429.2 | AF149279 | Phaseolus vulgaris |
| AAA34025.1 | M31480 | Spinacia oleracea | AAF63027.1 | AF244924 | Spinacia oleracea |
| AAB41696.1 | U69142 | Spinacia oleracea | CAA66037.1 | X97351 | Populus balsamifera subsp. |
| BAA21098.1 | AB001348 | Oryza sativa | trichocarpa | | |
| BAA96794.1 | AB037421 | Oryza sativa | CAA40796.1 | X57564 | Armoracia rusticana |
| BAB18543.1 | AB043539 | Oryza sativa | CAA66035.1 | X97349 | Populus balsamifera subsp. |
| CAA41376.1 | X58462 | Avicennia marina | trichocarpa | | |
| CRA41377.1 | X58463 | Beta vulgaris | BAA06334.1 | D30652 | Populus kitakamiensis |
| AAG43988.1 | AF215823 | Beta vulgaris | AAD11481.1 | U51191 | Glycine max |
| BAB19052.1 | AB044537 | Zea mays | BAA77389.1 | AB024439 | Scutellaria baicalensis |
| CAA71003.1 | Y09876 | Oryza sativa | CAB67121.1 | Y19023 | Lycopersicon esculentum |
| AAF73828.1 | AF162665 | Nicotiana tabacum | CAA50597.1 | X71593 | Lycopersicon esculentum |
| AAB70010.1 | AF017150 | Oryza sativa | AAD11482.1 | U51192 | Glycine max |
| CRA49425.1 | X69770 | Amaranthus hypochondriacus | CAA71489.1 | Y10463 | Spinacia oleracea |
| AAB58165.1 | AF000132 | Atriplex hortensis | BAA07241.1 | D38051 | Populus kitakamiensis |
| BAA96793.1 | AB030939 | Amaranthus hypochondriacus | CAA59487.1 | X85230 | Triticum aestivum |
| BAB18544.1 | AB043540 | Oryza sativa | AAA65637.1 | L13654 | Lycopersicon esculentum |
| BAA05466.1 | D26448 | Avicennia marina | AAG02215.1 | AF291667 | Pinus sylvestris |
| AAF08296.1 | AF196292 | Hordeum vulgare | CAA76374.2 | Y16776 | Spinacia oleracea |
| AAB47571.1 | U87848 | Apium graveolens | BAA11852.1 | D83224 | Populus nigra |
| CRA53075.1 | X75326 | Nicotiana plumbaginifolia | AAB41811.1 | L36157 | Medicago sativa |
| | | Zea mays | | | |

| SEQ ID NO. | Accession | Species | SEQ ID NO. | Accession | Species |
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| AA007211 | AF007211 | Glycine max | AA007211 | AF007211 | Glycine max |
| AA007212 | AF007212 | Populus balsamifera subsp. | AA007212 | AF007212 | Populus balsamifera subsp. |
| AA007213 | AF007213 | Nicotiana tabacum | AA007213 | AF007213 | Nicotiana tabacum |
| AA007214 | AF007214 | Zea mays | AA007214 | AF007214 | Zea mays |
| AA007215 | AF007215 | Triticum aestivum | AA007215 | AF007215 | Triticum aestivum |
| AA007216 | AF007216 | Oryza sativa | AA007216 | AF007216 | Oryza sativa |
| AA007217 | AF007217 | Arachis hypogaea | AA007217 | AF007217 | Arachis hypogaea |
| AA007218 | AF007218 | Gossypium hirsutum | AA007218 | AF007218 | Gossypium hirsutum |
| AA007219 | AF007219 | Armoracia rusticana | AA007219 | AF007219 | Armoracia rusticana |
| AA007220 | AF007220 | Nicotiana tabacum | AA007220 | AF007220 | Nicotiana tabacum |
| AA007221 | AF007221 | Asparagus officinalis | AA007221 | AF007221 | Asparagus officinalis |
| AA007222 | AF007222 | Nicotiana glauca | AA007222 | AF007222 | Nicotiana glauca |
| AA007223 | AF007223 | Zantedeschia aethiopica | AA007223 | AF007223 | Zantedeschia aethiopica |
| AA007224 | AF007224 | Pisum sativum | AA007224 | AF007224 | Pisum sativum |
| AA007225 | AF007225 | Hordeum vulgare | AA007225 | AF007225 | Hordeum vulgare |
| AA007226 | AF007226 | Hordeum vulgare | AA007226 | AF007226 | Hordeum vulgare |
| AA007227 | AF007227 | Mesembryanthemum crystallinum | AA007227 | AF007227 | Mesembryanthemum crystallinum |
| AA007228 | AF007228 | Spinacia oleracea | AA007228 | AF007228 | Spinacia oleracea |
| AA007229 | AF007229 | Helianthus annuus | AA007229 | AF007229 | Helianthus annuus |
| AA007230 | AF007230 | Lycopersicon esculentum | AA007230 | AF007230 | Lycopersicon esculentum |
| AA007231 | AF007231 | Nicotiana glauca | AA007231 | AF007231 | Nicotiana glauca |
| AA007232 | AF007232 | Nicotiana glauca | AA007232 | AF007232 | Nicotiana glauca |
| AA007233 | AF007233 | Gossypium hirsutum | AA007233 | AF007233 | Gossypium hirsutum |
| AA007234 | AF007234 | Helianthus annuus | AA007234 | AF007234 | Helianthus annuus |
| AA007235 | AF007235 | Hordeum vulgare | AA007235 | AF007235 | Hordeum vulgare |
| AA007236 | AF007236 | Chlamydomonas sp. W80 | AA007236 | AF007236 | Chlamydomonas sp. W80 |
| AA007237 | AF007237 | Chlamydomonas reinhardtii | AA007237 | AF007237 | Chlamydomonas reinhardtii |
| AA007238 | AF007238 | Lycopersicon esculentum | AA007238 | AF007238 | Lycopersicon esculentum |
| AA007239 | AF007239 | Triticum aestivum | AA007239 | AF007239 | Triticum aestivum |
| AA007240 | AF007240 | Betula pendula | AA007240 | AF007240 | Betula pendula |
| AA007241 | AF007241 | Antirrhinum majus | AA007241 | AF007241 | Antirrhinum majus |
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| AA007246 | AF007246 | Zea mays | AA007246 | AF007246 | Zea mays |
| AA007247 | AF007247 | Antirrhinum majus | AA007247 | AF007247 | Antirrhinum majus |
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| AA007252 | AF007252 | Antirrhinum majus | AA007252 | AF007252 | Antirrhinum majus |
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| AA007259 | AF007259 | Antirrhinum majus | AA007259 | AF007259 | |

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| AAK09326.1 | AF320613 | Zea mays | BAA76387.1 | D67038 | Pyrus pyrifolia |
| SEQ ID NO. 2375 | | | CRA67216.1 | X98627 | Malus x domestica |
| AAE14244.1 | AF110228 | Spinacia oleracea | CAA68538.1 | Y00478 | Lycopersicon esculentum |
| AAE14242.1 | AF110226 | Nicotiana tabacum | AAA33644.1 | M98357 | Pisum sativum |
| AAE14245.1 | AF110229 | Spinacia oleracea | CAA71140.1 | Y10034 | Rumex palustris |
| AAE14246.1 | AF110230 | Spinacia oleracea | AAA99793.1 | U54566 | Nicotiana glutinosa |
| | | | CAA60576.1 | X87097 | Pyrus communis |
| | | | AAB71421.1 | L29405 | Helianthus annuus |
| SEQ ID NO. 2379 | | | AAC48922.1 | U06047 | Vigna radiata |
| CRA57285.1 | X81629 | Brassica oleracea | CAA67119.1 | X98493 | Nicotiana tabacum |
| AAA32981.1 | L27664 | Brassica napus | CAA58232.1 | X03229 | Nicotiana tabacum |
| CRA57284.1 | X81628 | Brassica oleracea | | | |
| AAF65472.1 | AF252628 | Brassica juncea | SEQ ID NO. 2381 | | Brassica napus |
| AAC98808.1 | U68215 | Carica papaya | AAF98390.1 | AF287143 | Citrus unshiu |
| AAA33697.1 | L21978 | Petunia x hybrida | BAA93039.1 | AB033758 | Petunia x hybrida |
| AAF64528.1 | AF254125 | Carica papaya | BAA89009.1 | AB027455 | Nicotiana tabacum |
| AAB70883.1 | U19856 | Pelargonium x hortorum | AAF61647.1 | AF190634 | Perilla frutescens |
| BAA21541.1 | AB003514 | Actinidia deliciosa | BAA36421.1 | AB013596 | Verbena x hybrida |
| AAC48977.1 | U07953 | Pelargonium x hortorum | BAA36423.1 | AB013598 | Zea mays |
| CAA71738.1 | Y10749 | Betula pendula | AAA59054.1 | L34847 | Perilla frutescens |
| AAC37381.1 | L21976 | Petunia x hybrida | BAA36422.1 | AB013597 | Sorghum bicolor |
| CAA86468.1 | 246349 | Nicotiana tabacum | AAF17077.1 | AF199453 | Nicotiana tabacum |
| BAA94601.1 | AB033504 | Populus euramericana | AAB36652.1 | U32643 | Nicotiana tabacum |
| BAA34924.1 | AB013101 | Lycopersicon esculentum | AAK28304.1 | AF346432 | Nicotiana tabacum |
| BAA83466.1 | AB012857 | Nicotiana tabacum | AAB36653.1 | U32644 | Nicotiana triflora |
| AAF36484.1 | AF129074 | Prunus persica | BAA12737.1 | D85186 | Nicotiana tabacum |
| AAB70884.1 | U67861 | Pelargonium x hortorum | AAK28303.1 | AF346431 | Scutellaria baicalensis |
| CAA64799.1 | X95553 | Cucumis melo | BAA83484.1 | AB031274 | Perilla frutescens |
| CRA90904.1 | Z54199 | Lycopersicon esculentum | BAA19659.1 | AB002818 | Forsythia x intermedia |
| CAA41212.1 | X58273 | Lycopersicon esculentum | AAD21086.1 | AF127218 | Lycopersicon esculentum |
| AAA33698.1 | L21979 | Petunia x hybrida | CAA59450.1 | X85138 | Dortheanthus bellidiformis |
| CRA04895.1 | AJ001646 | Malus x domestica | CAB56231.1 | Y18871 | Solanum tuberosum |
| CAA82646.1 | 229529 | Nicotiana tabacum | AAB48444.1 | U82367 | Vitis vinifera |
| CAA54449.1 | X77232 | Prunus persica | BAB41020.1 | AB047093 | Vitis vinifera |
| AAF36483.1 | AF129073 | Prunus persica | BAB41026.1 | AB047099 | Vitis vinifera |
| AAC67233.1 | AF033582 | Cucumis sativus | BAB41024.1 | AB047097 | Vitis vinifera |
| AAC33524.1 | AF026793 | Prunus armeniaca | BAB41022.1 | AB047095 | Vitis labrusca x Vitis vinifera |
| BAA90550.1 | AB031027 | Prunus mume | BAB41017.1 | AB047090 | Vitis vinifera |
| CAA74328.1 | Y14005 | Malus x domestica | BAB41019.1 | AB047092 | Vitis vinifera |
| AAC36461.1 | AF030859 | Malus x domestica | BAB41021.1 | AB047094 | Vitis vinifera |
| AAA99792.1 | U54565 | Nicotiana glutinosa | BAB41023.1 | AB047096 | Vitis vinifera |

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| BAB01025.1 | AB047098 | Vitis vinifera | BAA05623.1 | D26574 | Daucus carota |
| BAA89008.1 | AB027454 | Petunia x hybrida | AAD37697.1 | AF145728 | Oryza sativa |
| AAB81683.1 | AF000372 | Vitis vinifera | AAF01764.2 | AF184277 | Glycine max |
| AAB81682.1 | AF000371 | Vitis vinifera | BAA21017.1 | D26578 | Daucus carota |
| BAB41018.1 | AB047091 | Vitis labrusca x Vitis vinifera | AAF73482.1 | AF268422 | Brassica rapa subsp. pekinensis |
| CAA31855.1 | X13500 | Zea mays | BAA93460.1 | AB028072 | Physcomitrella patens |
| SEQ ID NO. 2385 | | | SEQ ID NO. 2387 | | |
| AAB31704.1 | S72356 | Chloroplast Nicotiana | BAA97745.1 | AB037887 | Lupinus albus |
| sylvestris | | | BAA82130.1 | AB023385 | Lupinus albus |
| AAB31705.1 | S72358 | Chloroplast Nicotiana | CAA06921.1 | AJ006224 | Ipomoea batatas |
| sylvestris | | | AAF19822.1 | AF200826 | Ipomoea batatas |
| BAA07667.1 | D42070 | Nicotiana sylvestris | BAA92365.1 | AB039746 | Spirodela punctata |
| BAA78581.1 | AU066497 | Chlamydomonas sp. HS-5 | CAA04644.1 | AJ001270 | Phaseolus vulgaris |
| SEQ ID NO. 2386 | | | AAF19820.1 | AF200824 | Glycine max |
| AAD37696.1 | AF145727 | Oryza sativa | AAF19821.1 | AF200825 | Ipomoea batatas |
| BAA93463.1 | AB028075 | Physcomitrella patens | AAD20634.1 | AF126255 | Anchusa officinalis |
| CAA63222.1 | X92489 | Glycine max | CAA07280.1 | AJ006870 | Ipomoea batatas |
| CAA64221.1 | X94449 | Pimpinella brachycarpa | BAA97038.1 | AB029086 | Tagetes patula |
| AAK31270.1 | AC079890 | Oryza sativa | BAA82133.1 | AB023388 | Lycopersicon esculentum |
| AAF19980.1 | AF211193 | Oryza sativa | BAA82131.1 | AB023386 | Glycine max |
| CAA65456.2 | X96681 | Oryza sativa | BAA82132.1 | AB023387 | Oryza sativa |
| CAA64152.1 | X94375 | Pimpinella brachycarpa | SEQ ID NO. 2389 | | |
| CAA64491.1 | X95193 | Pimpinella brachycarpa | BAA07395.1 | D38220 | Brassica napus |
| AAD37695.1 | AF145726 | Oryza sativa | BAA07394.1 | D38219 | Brassica napus |
| AAD37700.1 | AF145731 | Oryza sativa | AAG30576.1 | AF314093 | Ricinus communis |
| CAA06728.1 | AJ005833 | Craterostigma plantagineum | CAA32217.1 | X14059 | Nicotiana tabacum |
| CAA06717.1 | AJ005820 | Craterostigma plantagineum | CAA32218.1 | X14060 | Lycopersicon esculentum |
| BAA05622.1 | D26573 | Daucus carota | AAA33712.1 | L11563 | Petunia x hybrida |
| BAA93462.1 | AB028074 | Physcomitrella patens | CAA32216.1 | X14058 | Nicotiana tabacum |
| AAD37698.1 | AF145729 | Oryza sativa | CAA56696.1 | X80670 | Lotus japonicus |
| BAA93465.1 | AB028077 | Physcomitrella patens | AAB52786.1 | U95317 | Solanum tuberosum |
| BAA05624.1 | D26575 | Daucus carota | AAB18985.1 | U76701 | Solanum tuberosum |
| BAA93468.1 | AB028080 | Physcomitrella patens | AAA95940.1 | U01029 | Phaseolus vulgaris |
| BAA05625.1 | D26576 | Daucus carota | AAA34033.1 | M32600 | Spinacia oleracea |
| BAA93466.1 | AB028078 | Physcomitrella patens | CAA38031.1 | X54097 | Betula pendula |
| BAA93464.1 | AB028076 | Physcomitrella patens | BAA13047.1 | D86226 | Spinacia oleracea |
| BAA93467.1 | AB028079 | Physcomitrella patens | AAA33114.1 | M33154 | Cucurbita maxima |
| BAA93461.1 | AB028073 | Physcomitrella patens | AAD19790.1 | AF055369 | Glycine max |
| AAF01765.1 | AF184278 | Glycine max | CAA58909.1 | X84103 | Cichorium intybus |

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|-----------------|----------|---------------------------|-----------------|----------|-------------------------------|
| AAA96813.1 | U13987 | Glycine max | AAG13663.1 | AF263457 | Zea mays |
| CAA37672.1 | X53603 | Phaseolus vulgaris | AAC98090.1 | AF067400 | Zea mays |
| AAA96727.1 | L23854 | Glycine max | BAA90816.1 | AP001168 | Oryza sativa |
| AAA62316.1 | U20450 | Zea mays | AAC98091.1 | AF067401 | Oryza sativa |
| AAD38068.1 | AF153448 | Zea mays | SEQ ID NO. 2398 | | |
| CAA40975.1 | X57844 | Hordeum vulgare | BAA1862.1 | AB026295 | Oryza sativa |
| CAA40976.1 | X57845 | Hordeum vulgare | AAB39995.1 | U82432 | Dianthus caryophyllus |
| CAA42739.1 | X60173 | Hordeum vulgare | AAD56580.1 | AF184273 | Daucus carota |
| AAB93560.1 | AF022780 | Glycine max | AAD56581.1 | AF184274 | Daucus carota |
| AAF17595.1 | AF203033 | Chlamydomonas reinhardtii | CRA50498.1 | X71360 | Malus sp. |
| CRA45497.1 | X64136 | Volvox carteri | AAD26205.1 | AF117269 | Malus x domestica |
| AAC49460.1 | U39931 | Chlorella vulgaris | AAB82287.1 | AF026058 | Matthiola incana |
| AAC49459.1 | U39930 | Chlorella vulgaris | BAA20143.1 | AB003779 | Perilla frutescens |
| CAA29497.1 | X06134 | Nicotiana tabacum | AAB66560.1 | AF015885 | Callistephus chinensis |
| AAA18377.1 | U08029 | Spinacia oleracea | BAB21477.1 | AB044091 | Torenia fournieri |
| AAB39553.1 | U64308 | Agrostemma githago | CAA53580.1 | X75966 | Vitis vinifera |
| AAA03202.1 | M27821 | Zea mays | BAA75305.1 | AB023786 | Ipomoea batatas |
| AAA33483.1 | M77792 | Zea mays | AAB84049.1 | AF028602 | Ipomoea purpurea |
| AAB39555.1 | U64310 | Agrostemma githago | BAA75306.1 | AB023787 | Ipomoea batatas |
| AAB39554.1 | U64309 | Agrostemma githago | CAA73094.1 | Y12489 | Forsythia x intermedia |
| CAA33819.1 | X15820 | Oryza sativa | CAA69252.1 | Y07955 | Oryza sativa |
| CAA33817.1 | X15819 | Oryza sativa | SEQ ID NO. 2399 | | |
| AAA33998.1 | L23853 | Glycine max | CAC12822.1 | AJ299252 | Nicotiana tabacum |
| CRA58908.1 | X84102 | Cichorium intybus | AAF63205.1 | AF245119 | Mesembryanthemum crystallinum |
| CAA40090.1 | X56771 | Chlorella vulgaris | AAC24587.1 | AF071893 | Prunus armeniaca |
| CAA45776.1 | X64446 | Zea mays | BAB16083.1 | AB036883 | Oryza sativa |
| AAD17694.1 | AF077372 | Zea mays | BAB03248.1 | AB037183 | Oryza sativa |
| AAA96242.1 | L40147 | Avena strigosa | AAF76898.1 | AF274033 | Atriplex hortensis |
| AAB20155.1 | S61885 | Nicotiana plumbaginifolia | CAB96900.1 | AJ251250 | Catharanthus roseus |
| AAA96245.1 | L40151 | Hordeum pusillum | CAB96899.1 | AJ251249 | Catharanthus roseus |
| AAA96247.1 | L40153 | Hordeum stenostachys | BAA07321.1 | D38123 | Nicotiana tabacum |
| SEQ ID NO. 2390 | | | AAG43545.1 | AF211527 | Nicotiana tabacum |
| AAG36871.1 | AF239818 | Zea mays | BAA99376.1 | AP002526 | Oryza sativa |
| AAG36870.1 | AF239817 | Zea mays | AAB23899.1 | AF193803 | Oryza sativa |
| AAG36869.1 | AF239816 | Zea mays | BAA78738.1 | AB023482 | Oryza sativa |
| SEQ ID NO. 2395 | | | AAC62619.1 | AF057373 | Nicotiana tabacum |
| AAC49600.1 | U30304 | Solanum brevifolius | AAG43549.1 | AF211531 | Nicotiana tabacum |
| SEQ ID NO. 2397 | | | AAG43548.1 | AF211530 | Nicotiana tabacum |
| | | | AAG32659.1 | AF253971 | Picea abies |

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| SEQ ID NO. 2400 | AAA0651.1 | U27116 | Populus tremuloides | BAA81777.1 | AP000364 | Oryza sativa |
| | AAC49915.1 | U62735 | Nicotiana tabacum | CAA10217.1 | AJ130841 | Populus balsamifera subsp. |
| | CAA12198.1 | AJ224894 | Populus balsamifera subsp. | trichocarpa | | |
| | trichocarpa | | | AAD50441.1 | AF168778 | Eucalyptus globulus |
| | AAC08395.1 | AF053553 | Mesembryanthemum crystallinum | AAD50442.1 | AF168779 | Eucalyptus globulus |
| | CAA11496.1 | AJ223621 | Populus balsamifera subsp. | AAC15067.1 | AF060180 | Nicotiana tabacum |
| | trichocarpa | | | | | |
| | AAD02050.1 | AF036095 | Pinus taeda | SEQ ID NO. 2402 | | |
| | CAB45149.1 | AJ242980 | Zea mays | CAB82852.1 | Z30329 | Mesembryanthemum crystalli |
| | AAC28973.1 | U20736 | Medicago sativa subsp. sativa | CAA82991.1 | Z30330 | Spinacia oleracea |
| | CAA90969.1 | Z54233 | Vitis vinifera | BAB03409.1 | AP002816 | Oryza sativa |
| | CAB05369.1 | Z82982 | Nicotiana tabacum | CAA50374.1 | X71057 | Nicotiana tabacum |
| | AAF44689.1 | AF240466 | Populus tomentosa | CAA82994.1 | Z30333 | Mesembryanthemum crystalli |
| | BAA78733.1 | AB023482 | Oryza sativa | CAA82993.1 | Z30332 | Spinacia oleracea |
| | AAC49916.1 | U62736 | Nicotiana tabacum | BAB18104.1 | AB042714 | Chlamydomonas reinhardtii |
| | AAC49913.1 | U38612 | Nicotiana tabacum | BAB18105.1 | AB042715 | Chlamydomonas reinhardtii |
| | CAA90894.1 | Z54183 | Petroselinum crispum | CAA62476.1 | X90990 | Solanum tuberosum |
| | AAB80931.1 | AF022775 | Nicotiana tabacum | AA850304.1 | M92989 | Pisum sativum |
| | AAA33851.1 | M69184 | Petroselinum crispum | AAF66637.1 | AF143505 | Lycopersicon esculentum |
| | CAA83943.1 | Z33878 | Petroselinum crispum | BAA96593.1 | AP002481 | Oryza sativa |
| | CAA11495.1 | AJ223620 | Populus balsamifera subsp. | CAA66616.1 | X97980 | Solanum berthaultii |
| | trichocarpa | | | CAA73067.1 | Y12464 | Sorghum bicolor |
| | CAA12200.1 | AJ224896 | Populus balsamifera subsp. | CAA73068.1 | Y12465 | Sorghum bicolor |
| | trichocarpa | | | BAA83689.1 | AB011968 | Oryza sativa |
| | CAA12199.1 | AJ224895 | Populus balsamifera subsp. | BAA83688.1 | AB011967 | Oryza sativa |
| | trichocarpa | | | AAB62693.1 | AF004947 | Oryza sativa |
| | CAB45150.1 | AJ242981 | Zea mays | AAD23582.1 | AF128443 | Glycine max |
| | AAC49914.1 | U62734 | Nicotiana tabacum | AAF22219.1 | AF141378 | Zea mays |
| | CAA72911.1 | Y12228 | Eucalyptus gunnii | BAA05649.1 | D26602 | Nicotiana tabacum |
| | AAK16714.1 | AF327458 | Populus alba x Populus | CAA71142.1 | Y10036 | Cucumis sativus |
| | glandulosa | | | CAA82992.1 | Z30331 | Mesembryanthemum crystallinum |
| | AAA59389.1 | U13151 | Zinnia elegans | SEQ ID NO. 2403 | | |
| | AAD50443.1 | AF168780 | Eucalyptus globulus | CAB41474.1 | AJ238402 | Catharanthus roseus |
| | CAA91228.1 | Z56282 | Nicotiana tabacum | AAK31592.1 | AY029178 | Brassica rapa subsp. pekinensis |
| | AAC26191.1 | AF046122 | Eucalyptus globulus | AAG17470.1 | AF123609 | Triticum aestivum |
| | AAB61680.1 | L22203 | Stellaria longipes | AAG33645.1 | AF092917 | Vicia sativa |
| | BAA81774.1 | AP000364 | Oryza sativa | AAD10204.1 | AF030260 | Vicia sativa |
| | BAA88234.1 | AB035144 | Citrus natsudaoidai | AAB94586.1 | AF022457 | Glycine max |
| | BAA19102.1 | AB000408 | Populus kitakamiensis | BAA93632.1 | AB024931 | Lotus japonicus |
| | | | | BAA76380.1 | AB023636 | Glycyrrhiza echinata |

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| BAA74465.1 | AB022732 | Glycyrrhiza echinata | AAB65161.1 | AF002666 | Solanum commersonii |
| CAA70576.1 | Y09424 | Nepeta racemosa | CAB97352.1 | AJ249144 | Hordeum vulgare |
| AAC49188.2 | U29333 | Pisum sativum | CAA67969.1 | X99655 | Betula pendula |
| AAG09208.1 | AF175278 | Pisum sativum | CAA67967.1 | X99653 | Betula pendula |
| BAA84071.1 | AB028151 | Antirrhinum majus | AAG09136.1 | AF150932 | Physcomitrella patens |
| CAA89260.1 | Z49263 | Pisum sativum | AAG09135.1 | AF150931 | Physcomitrella patens |
| BAA22422.1 | AB001379 | Glycyrrhiza echinata | AAC83170.1 | U78948 | Malus x domestica |
| AAF34538.1 | AF195817 | Beta vulgaris | BAA25246.1 | D89671 | Ceratopteris richardii |
| AAF34531.1 | AF195810 | Trifolium pratense | AAF13261.1 | AF198175 | Dendrobium greg Madame Tho |
| AAD38929.1 | AF135484 | Glycine max | CAC35027.1 | AJ291298 | Pisum sativum |
| AAF34525.1 | AF195804 | Lens culinaris | CAC37031.1 | AJ279089 | Pisum sativum |
| BAA93634.1 | AB025016 | Lotus japonicus | AAC39037.1 | AF068726 | Nicotiana sylvestris |
| AAF34530.1 | AF195809 | Vigna radiata | AAB08875.1 | U67451 | Brassica oleracea |
| BAA84072.1 | AB028152 | Torenia hybrida | AAG30923.1 | AF306349 | Eucalyptus globulus |
| AAB94591.1 | AF022462 | Glycine max | AAG27459.1 | AF305696 | Eucalyptus globulus |
| AAF34529.1 | AF195808 | Vigna radiata | AAG24909.1 | AF305076 | Eucalyptus globulus |
| AAF45143.1 | AF195819 | Glycine max | AAB08876.1 | U67452 | Brassica oleracea |
| AAF34532.1 | AF195811 | Trifolium pratense | AAD39036.1 | AF068725 | Nicotiana sylvestris |
| AAF45142.1 | AF195818 | Glycine max | CAA67968.1 | X99654 | Betula pendula |
| AAF34528.1 | AF195807 | Vigna radiata | AAD20329.1 | AF109403 | Sinapis alba |
| AAF34527.1 | AF195806 | Vigna radiata | | | |
| SEQ ID NO. 2404 | | | SEQ ID NO. 2405 | | |
| AAG09919.1 | AF112149 | Zea mays | AAG34803.1 | AF243368 | Glycine max |
| AAB51377.1 | U91964 | Medicago sativa | AAF64450.1 | AF239928 | Euphorbia esula |
| BAA94342.1 | AB041020 | Oryza sativa | AAG34798.1 | AF243363 | Glycine max |
| AAF66997.2 | AF139664 | Oryza sativa | AAG34801.1 | AF243366 | Glycine max |
| CAB97354.1 | AJ249146 | Hordeum vulgare | AAG34797.1 | AF243362 | Glycine max |
| AAD10625.1 | AF033378 | Lolium temulentum | AAG34796.1 | AF243361 | Glycine max |
| AAG43200.1 | AF112150 | Zea mays | AAG34807.1 | AF243372 | Glycine max |
| BAA33457.1 | AB007504 | Triticum aestivum | AAG34804.1 | AF243369 | Glycine max |
| AAB00081.1 | L46400 | Zea mays | AAG34810.1 | AF243375 | Glycine max |
| AAD10626.1 | AF033379 | Lolium temulentum | AAG34809.1 | AF243374 | Glycine max |
| AAF19047.1 | AF058697 | Oryza sativa | AAG34805.1 | AF243370 | Glycine max |
| BAA81883.1 | AB003325 | Oryza sativa | AAC18566.1 | AF048978 | Glycine max |
| AAF19721.1 | AF176782 | Petunia x hybrida | AAG34808.1 | AF243373 | Glycine max |
| AAF19048.1 | AF058698 | Oryza sativa | AAG34800.1 | AF243365 | Glycine max |
| AAD39035.1 | AF068724 | Nicotiana tabacum | AAG34829.1 | AF244686 | Zea mays |
| CAA04321.1 | AJ000759 | Malus x domestica | AAG34802.1 | AF243367 | Glycine max |
| AAF04972.1 | AF091458 | Oryza sativa | AAG34837.1 | AF244694 | Zea mays |
| CAB56800.1 | AJ011675 | Oryza sativa | CAA09187.1 | AJ010448 | Alopecurus myosuroides |
| | | | CRA09188.1 | AJ010449 | Alopecurus myosuroides |

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| AAG34849.1 | AF244706 | Zea mays | BAA88981.1 | AB025778 | Citrus unshiu |
| AAG34844.1 | AF244701 | Zea mays | CAA49428.1 | X69773 | Vicia faba |
| AAG34806.1 | AF243371 | Glycine max | CAB38022.1 | AJ132000 | Craterostigma plantagineum |
| CAA71784.1 | Y10820 | Glycine max | CAA09593.1 | AJ011319 | Lycopersicon esculentum |
| AAA68430.1 | J03679 | Solanum tuberosum | CAA09910.1 | AJ012080 | Pisum sativum |
| CAA04391.1 | AJ000923 | Carica papaya | CAA65639.1 | X96938 | Tulipa gesneriana |
| AAG34836.1 | AF244693 | Zea mays | CAA65640.1 | X96939 | Tulipa gesneriana |
| AAG34831.1 | AF244688 | Zea mays | CAB40794.1 | AJ131943 | Medicago truncatula |
| AAG34847.1 | AF244704 | Zea mays | AAC17867.1 | AF049487 | Medicago sativa |
| AAC32118.1 | AF051214 | Picea mariana | AAC39323.1 | AF030231 | Glycine max |
| AAE29773.1 | AF159229 | Gossypium hirsutum | CAA76057.1 | Y16091 | Daucus carota |
| AAG41204.1 | AF321437 | Suaeda maritima | BAA89049.1 | AB029401 | Citrus unshiu |
| CAC24549.1 | AJ296343 | Cichorium intybus x Cichorium endivia | CAA63122.1 | X92378 | Alnus glutinosa |
| | | | CAA76056.1 | Y16090 | Daucus carota |
| | | | CAA53081.1 | X75332 | Daucus carota |
| SEQ ID NO. 2407 | | | AAC28107.1 | AF079851 | Pisum sativum |
| AAG43509.1 | AF210049 | Petunia x hybrida | CAB40795.1 | AJ131964 | Medicago truncatula |
| AAC15460.1 | AF060569 | Lavatera thuringiaca | AAA34196.1 | L19762 | Lycopersicon esculentum |
| | | | BAA01108.1 | D10266 | Vigna radiata |
| SEQ ID NO. 2409 | | | BAA88905.1 | AB022092 | Citrus unshiu |
| BAB20583.1 | AB042270 | Zea mays | CAA09681.1 | AJ011535 | Lycopersicon esculentum |
| AAK13126.1 | AC083945 | Oryza sativa | AAA97571.1 | U24087 | Solanum tuberosum |
| CAC09578.1 | AJ298990 | Fagus sylvatica | AAD28641.1 | U73588 | Gossypium hirsutum |
| AAA85479.1 | U41103 | Lycopersicon esculentum | AAA97572.1 | U24088 | Solanum tuberosum |
| AAB39386.1 | U47279 | Lycopersicon esculentum | CAA04512.1 | AJ001071 | Pisum sativum |
| AAB97160.1 | AF022727 | Nicotiana tabacum | BAB20799.1 | AB045710 | Pyrus pyrifolia |
| | | | CAA57881.1 | X82504 | Chenopodium rubrum |
| SEQ ID NO. 2410 | | | AAF85966.1 | AF263384 | Saccharum officinarum |
| AAD01541.1 | AF004810 | Glycine max | CAA26229.1 | X02382 | Zea mays |
| AAB01552.1 | L47607 | Picea glauca | CAA26247.1 | X02400 | Zea mays |
| AAD09208.1 | U38246 | Glycine soja | CAA46017.1 | X64770 | Oryza sativa |
| AAD09209.1 | U38247 | Glycine soja | CAA78747.1 | Z15028 | Oryza sativa |
| | | | CAA04543.1 | AJ001117 | Triticum aestivum |
| SEQ ID NO. 2413 | | | CAA46701.1 | X65871 | Hordeum vulgare |
| BAA03763.1 | D16247 | Nicotiana sylvestris | CAC32462.1 | AJ311496 | Pisum sativum |
| AAF40306.1 | AF156667 | Vigna radiata | CAA75793.1 | Y15802 | Hordeum vulgare |
| AAF75791.1 | AF271892 | Pisum sativum | AAA33515.1 | L33244 | Zea mays |
| CAA68193.1 | X99937 | Spinacia oleracea | CAA41774.1 | X59046 | Oryza sativa |
| | | | AAC41682.1 | L03366 | Oryza sativa |
| SEQ ID NO. 2415 | | | CAA49551.1 | X69931 | Hordeum vulgare |
| BAA88904.1 | AB022091 | Citrus unshiu | CAA03935.1 | AJ000153 | Triticum aestivum |

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| CAB38021.1 | AJ131999 | Craterostigma plantagineum | AAE17077.1 | AF199453 | Sorghum bicolor |
| CAA57499.1 | X81974 | Beta vulgaris | CAA59450.1 | X85138 | Lycopersicon esculentum |
| CAA47264.1 | X66728 | Hordeum vulgare | BAB41017.1 | AB047090 | Vitis labrusca x Vitis vinifera |
| | | | BAB41026.1 | AB047099 | Vitis vinifera |
| | | | BAB41024.1 | AB047097 | Vitis vinifera |
| | | | BAB41022.1 | AB047095 | Vitis vinifera |
| | | | BAB41020.1 | AB047093 | Vitis vinifera |
| | | | BAA89008.1 | AB027454 | Petunia x hybrida |
| | | | BAB41018.1 | AB047091 | Vitis labrusca x Vitis vinifera |
| | | | CAB56231.1 | Y18871 | Dorotheanthus bellidifolius |
| | | | AAB81683.1 | AF000372 | Vitis vinifera |
| | | | BAB41019.1 | AB047092 | Vitis vinifera |
| | | | BAB41025.1 | AB047098 | Vitis vinifera |
| | | | BAB41023.1 | AB047096 | Vitis vinifera |
| | | | BAB41021.1 | AB047094 | Vitis vinifera |
| | | | AAB81682.1 | AF000371 | Vitis vinifera |
| | | | BAA19659.1 | AB002818 | Perilla frutescens |
| | | | BAA90787.1 | AB038248 | Ipomoea batatas |
| | | | AAD04166.1 | AF101972 | Phaseolus lunatus |
| | | | AAB86473.1 | AF028237 | Ipomoea purpurea |
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| | | | SEQ ID NO. 2420 | | |
| | | | CAA64614.1 | X95296 | Lycopersicon esculentum |
| | | | AAF22256.1 | AF161711 | Pimpinella brachycarpa |
| | | | CAA78386.1 | Z13996 | Petunia x hybrida |
| | | | CAA67600.1 | X99210 | Lycopersicon esculentum |
| | | | CAB43399.1 | AJ006292 | Antirrhinum majus |
| | | | CAA78387.1 | Z13997 | Petunia x hybrida |
| | | | BAA88222.1 | AB028650 | Nicotiana tabacum |
| | | | BAA88224.1 | AB028652 | Nicotiana tabacum |
| | | | BAA88221.1 | AB028649 | Nicotiana tabacum |
| | | | CAA66952.1 | X98308 | Lycopersicon esculentum |
| | | | AAG08962.1 | AF122054 | Solanum tuberosum |
| | | | BAA88223.1 | AB028651 | Nicotiana tabacum |
| | | | AAB41101.1 | U72762 | Nicotiana tabacum |
| | | | AAF66731.1 | AF146706 | Petunia x hybrida |
| | | | AAF66727.1 | AF146702 | Petunia x hybrida |
| | | | AAF66729.1 | AF146704 | Petunia integrifolia |
| | | | AAF66728.1 | AF146703 | Petunia integrifolia |
| | | | AAF66732.1 | AF146707 | Petunia x hybrida |
| | | | AAF66730.1 | AF146705 | Petunia x hybrida |
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| | | | SEQ ID NO. 2417 | | |
| | | | AAF61647.1 | AF190634 | Lycopersicon esculentum |
| | | | BAA89009.1 | AB027455 | Pimpinella brachycarpa |
| | | | AA59054.1 | L34847 | Petunia x hybrida |
| | | | BAA93039.1 | AB033758 | Lycopersicon esculentum |
| | | | BAA36423.1 | AB013598 | Antirrhinum majus |
| | | | BAA36421.1 | AB013596 | Petunia x hybrida |
| | | | AAF98390.1 | AF287143 | Nicotiana tabacum |
| | | | BAA36422.1 | AB013597 | Nicotiana tabacum |
| | | | BAA83484.1 | AB031274 | Nicotiana tabacum |
| | | | AAB36652.1 | U32643 | Lycopersicon esculentum |
| | | | AAK28304.1 | AF346432 | Solanum tuberosum |
| | | | AAD21086.1 | AF127218 | Nicotiana tabacum |
| | | | AAB36653.1 | U32644 | Nicotiana tabacum |
| | | | BAA12737.1 | D85186 | Petunia x hybrida |
| | | | AAK28303.1 | AF346431 | Petunia x hybrida |

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| AAF66734.1 | AF146709 | Petunia axillaris | AAA74017.1 | U30475 | Glycine max |
| AAF66733.1 | AF146708 | Petunia axillaris | | | |
| SEQ ID NO. 2421 | | | SEQ ID NO. 2422 | | |
| AAF01764.2 | AF184277 | Glycine max | AAD17230.1 | AF117339 | Nicotiana tabacum |
| BAB18171.1 | AB042769 | Zinnia elegans | CAA09935.1 | AJ012165 | Capsicum annuum |
| BAA21017.1 | D26578 | Daucus carota | BAA33755.2 | AB017480 | Nicotiana tabacum |
| AAD37697.1 | AF145728 | Oryza sativa | AAK15322.1 | AF332134 | Chloroplast Medicago sativa |
| BAA05625.1 | D26576 | Daucus carota | CAA06853.1 | AJ006095 | Cicer arietinum |
| AAF01765.1 | AF184278 | Glycine max | BAA57906.1 | AB001684 | Chlorella vulgaris |
| BAA05623.1 | D26574 | Daucus carota | SEQ ID NO. 2423 | | |
| BAA93465.1 | AB028077 | Physcomitrella patens | CAA55739.1 | X79138 | Nicotiana tabacum |
| CAA64417.1 | X94947 | Lycopersicon esculentum | CAA55742.1 | X79141 | Nicotiana tabacum |
| BAA93461.1 | AB028073 | Physcomitrella patens | CAA55641.1 | X79008 | Nicotiana tabacum |
| BAA93464.1 | AB028076 | Physcomitrella patens | CAA55642.1 | X79009 | Nicotiana tabacum |
| BAA93466.1 | AB028078 | Physcomitrella patens | CAA55737.1 | X79136 | Nicotiana tabacum |
| BAA05624.1 | D26575 | Daucus carota | CAA55741.1 | X79140 | Nicotiana tabacum |
| BAA05622.1 | D26573 | Daucus carota | SEQ ID NO. 2431 | | |
| BAA93467.1 | AB028079 | Physcomitrella patens | AAB18669.1 | U11716 | Pisum sativum |
| AAD37698.1 | AF145729 | Oryza sativa | AAA33662.1 | M18250 | Pisum sativum |
| BAA93460.1 | AB028072 | Physcomitrella patens | AAD25355.1 | AF115574 | Pisum sativum |
| BAB18164.1 | AB042762 | Zinnia elegans | | | |
| BAA93468.1 | AB028080 | Physcomitrella patens | SEQ ID NO. 2442 | | |
| AAD37699.1 | AF145730 | Oryza sativa | AAC33475.1 | AF082531 | Pimpinella brachycarpa |
| AAD38144.1 | AF139497 | Prunus armeniaca | AAF19968.1 | AF207699 | Elaeis guineensis |
| AAA63768.2 | AF339748 | Helianthus annuus | AAK21252.1 | AF335239 | Petunia x hybrida |
| CAA62608.1 | X91212 | Lycopersicon esculentum | AAK21251.1 | AF335238 | Petunia x hybrida |
| BAA93463.1 | AB028075 | Physcomitrella patens | CAA53782.1 | X76188 | Nicotiana tabacum |
| CAA06717.1 | AJ005820 | Craterostigma plantagineum | BAA81886.1 | AB003328 | Oryza sativa |
| BAB18170.1 | AB042768 | Zinnia elegans | AAD38369.1 | AF141965 | Oryza sativa |
| CAA64221.1 | X94449 | Pimpinella brachycarpa | AAK21257.1 | AF335244 | Petunia x hybrida |
| CAA64491.1 | X95193 | Pimpinella brachycarpa | AAB41526.1 | U25696 | Sinapis alba |
| CAA64152.1 | X94375 | Pimpinella brachycarpa | AAK21253.1 | AF335240 | Petunia x hybrida |
| AAD37695.1 | AF145726 | Oryza sativa | AAG43199.1 | AF112148 | Zea mays |
| AAD37700.1 | AF145731 | Oryza sativa | AAK21254.1 | AF335241 | Petunia x hybrida |
| CAA06728.1 | AJ005833 | Craterostigma plantagineum | AAB50187.1 | U49734 | Sorghum bicolor |
| CAA65456.2 | X96681 | Oryza sativa | BAA85630.1 | AB022665 | Gnetum parvifolium |
| AAK31270.1 | AC079890 | Oryza sativa | CAA04322.1 | AJ000760 | Malus x domestica |
| AAF19980.1 | AF211193 | Oryza sativa | AAB58907.1 | U76726 | Pinus radiata |
| AAD37696.1 | AF145727 | Oryza sativa | AAF22138.1 | AF129875 | Capsicum annuum |
| CAA63222.1 | X92489 | Glycine max | | | |

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| AAB64250.1 | U78782 | Oryza sativa | AAF63024.1 | AF244921 | Spinacia oleracea |
| AAD01266.1 | AF006210 | Pinus resinosa | CAA80502.1 | Z22920 | Spirodela polyrrhiza |
| CAB56800.1 | AJ011675 | Oryza sativa | AAD11481.1 | U51191 | Glycine max |
| AAR21249.1 | AF335236 | Petunia x hybrida | AAD11482.1 | U51192 | Glycine max |
| AAC97158.1 | U69483 | Picea mariana | CAA59487.1 | X85230 | Triticum aestivum |
| AAC97157.1 | U69482 | Picea mariana | CAC21393.1 | AJ401276 | Zea mays |
| AAC97146.1 | U46582 | Picea mariana | AAB97734.1 | AF014502 | Glycine max |
| AAC49817.1 | U78892 | Oryza sativa | CAA71495.1 | Y10469 | Spinacia oleracea |
| AAB00078.1 | L46397 | Zea mays | AAB48986.1 | U16727 | Medicago truncatula |
| AAD09342.1 | AF023615 | Pinus radiata | AAA98491.1 | L36981 | Petroselinum crispum |
| AAF04972.1 | AF091458 | Oryza sativa | AAA65637.1 | L13654 | Lycopersicon esculentum |
| AAF77579.1 | AF072534 | Capsicum annuum | AAA65636.1 | L13653 | Lycopersicon esculentum |
| CAB97353.1 | AJ249145 | Hordeum vulgare | AAF63027.1 | AF244924 | Spinacia oleracea |
| AAB00079.1 | L46398 | Zea mays | BAA92500.1 | AP001383 | Oryza sativa |
| AAD51423.1 | U78950 | Malus x domestica | CAA76374.2 | Y16776 | Spinacia oleracea |
| BAA33458.1 | AB007505 | Triticum aestivum | CAA62226.1 | X90693 | Medicago sativa |
| AAF21900.1 | AF109153 | Oryza sativa | CAA40796.1 | X57564 | Armoracia rusticana |
| | | | CAA71490.1 | Y10464 | Spinacia oleracea |
| | | | AAC49820.1 | AF014469 | Oryza sativa |
| SEQ ID NO. 2444 | | Solanum tuberosum subsp. | BAA82306.1 | AB027752 | Nicotiana tabacum |
| AAD22975.1 | AF126551 | | CAA62597.1 | X91172 | Raphanus sativus |
| tuberosum | | | BAA77388.1 | AB024438 | Scutellaria baicalensis |
| CAA48638.1 | X68678 | Zea mays | CAA62225.1 | X90692 | Medicago sativa |
| AAF65770.1 | AF242312 | Euphorbia esula | BAA92497.1 | AP001383 | Oryza sativa |
| AAC05639.1 | AF052206 | Chlamydomonas reinhardtii | AAF65464.2 | AF247700 | Oryza sativa |
| AAG03106.1 | AC073405 | Oryza sativa | BAA92422.1 | AP001366 | Oryza sativa |
| BAA84791.1 | AP000559 | Oryza sativa | BAA01950.1 | D11337 | Vigna angularis |
| | | | AAD37427.1 | AF149277 | Phaseolus vulgaris |
| SEQ ID NO. 2445 | | Chlamydomonas reinhardtii | AAB41812.1 | L36158 | Medicago sativa |
| AAB71833.1 | AF008568 | Petroselinum crispum | BAA07664.1 | D42065 | Nicotiana tabacum |
| AAA33858.1 | M62757 | Populus deltoides | BAA96643.1 | AP002482 | Oryza sativa |
| AAA73483.1 | U27348 | Nicotiana tabacum | CAA71491.1 | Y10465 | Spinacia oleracea |
| BAA21726.1 | AB006187 | Cicer arietinum | BAA94962.1 | AB042103 | Asparagus officinalis |
| CAA59508.1 | X85252 | Hordeum vulgare | BAA03911.1 | D16442 | Oryza sativa |
| BAA08531.1 | D49655 | | AAB32676.1 | M37637 | Arachis hypogaea |
| | | | CAA09881.1 | AJ011939 | Trifolium repens |
| SEQ ID NO. 2446 | | Spinacia oleracea | CAA71488.1 | Y10462 | Spinacia oleracea |
| CAA76376.1 | Y16778 | Glycine max | AAB02926.1 | U59284 | Linum usitatissimum |
| AAD11483.1 | U51193 | Glycine max | AAC49819.1 | AF014468 | Oryza sativa |
| AAD11484.1 | U51194 | Scutellaria baicalensis | CAA62615.1 | X91232 | Mercurialis annua |
| BAA77387.1 | AB024437 | Oryza sativa | AAC49821.1 | AF014470 | Oryza sativa |
| BAA03644.1 | D14997 | | | | |

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|-----------------|----------|-----------------------------|-----------------|----------|-------------------------------|
| AAB67737.1 | L77080 | Stylosanthes humilis | BAA83472.1 | AB004648 | Oryza sativa |
| CAA71496.1 | Y10470 | Spinacia oleracea | CAA56844.1 | X80876 | Oryza sativa |
| | | | AAD28476.1 | AF133838 | Sandersonia aurantiaca |
| SEQ ID NO. 2447 | | | BAA83473.1 | AB004819 | Oryza sativa |
| AAB71887.1 | AF020791 | Hordeum vulgare | AAK27968.1 | AF242372 | Ipomoea batatas |
| BAA05101.1 | D26105 | Hordeum vulgare | CAA84378.1 | Z34895 | Vicia sativa |
| BAA05102.1 | D26106 | Cucumis sativus | AAC35211.1 | U12637 | Hemerocallis hybrid cultiv. |
| BAB20760.1 | AB037113 | Cucumis sativus | AAD28477.1 | AF133839 | Sandersonia aurantiaca |
| BAA22284.1 | AB007120 | Oryza sativa | BAA11170.1 | D76415 | Oryza sativa |
| CAA06705.1 | AJ005802 | Solanum tuberosum | AAD20453.1 | AF099203 | Oryza sativa |
| AAK16728.1 | AF332962 | Chlamydomonas reinhardtii | CAB38314.1 | AJ131995 | Carica papaya |
| AAK16729.1 | AF332963 | Polytomella sp. 'Pringsheim | AAD53012.1 | AF089849 | Brassica napus |
| 198.80' | | | AAB37233.1 | U34747 | Phalaenopsis sp. SM9108 |
| AAC84139.1 | AF101426 | Cichorium intybus | | | |
| SEQ ID NO. 2448 | | | SEQ ID NO. 2454 | | |
| AAA16209.1 | M95747 | Triticum aestivum | CAB55395.1 | AL117264 | Oryza sativa |
| AAA74724.1 | M95746 | Triticum aestivum | BAA93021.1 | AP001552 | Oryza sativa |
| | | | BAA92501.1 | AP001383 | Oryza sativa |
| | | | AAA17740.1 | U08285 | Nicotiana tabacum |
| SEQ ID NO. 2449 | | | | | |
| CAB17076.1 | Z39954 | Phaseolus vulgaris | SEQ ID NO. 2455 | | |
| BAA88898.1 | AB020961 | Zea mays | AAF87216.1 | AF231351 | Nicotiana tabacum |
| CAA05894.1 | AJ003137 | Lycopersicon esculentum | CAA67782.1 | X99405 | Nicotiana tabacum |
| AAD48496.1 | AF172856 | Lycopersicon esculentum | AAB69317.1 | AF012861 | Petroselinum crispum |
| CAB53515.1 | AJ245924 | Solanum tuberosum | CAB52708.1 | AJ010712 | Solanum tuberosum |
| AAB88263.1 | AF019147 | Zea mays | CAB52685.1 | AJ132346 | Dunaliella bioculata |
| CAB17074.1 | Z39952 | Phaseolus vulgaris | CAA04994.1 | AJ001772 | Nicotiana tabacum |
| CAA12118.1 | AJ224766 | Phaseolus vulgaris | CAA58775.1 | X83923 | Solanum tuberosum |
| AAB68374.1 | U52970 | Phaseolus vulgaris | CAA03941.1 | AJ000184 | Spinacia oleracea |
| AAA79915.1 | U17135 | Phaseolus vulgaris | CAA03939.1 | AJ000182 | Spinacia oleracea |
| CAA53377.1 | X75749 | Dianthus caryophyllus | CAA03940.1 | AJ000183 | Spinacia oleracea |
| CAB16317.1 | Z39173 | Vicia sativa | AAB41552.1 | U18238 | Medicago sativa subsp. sativa |
| AAC49455.1 | U41902 | Nicotiana tabacum | AAD11426.1 | AF097663 | Mesembryanthemum crystallinum |
| CAA57538.1 | X82011 | Pseudotsuga menziesii | AAB69319.1 | AF012863 | Petroselinum crispum |
| AAB41816.1 | U44947 | Cicer arietinum | CAA52442.1 | X74421 | Solanum tuberosum |
| AAB70820.2 | AF019145 | Pisum sativum | AAB69318.1 | AF012862 | Petroselinum crispum |
| AAB88262.1 | AF019146 | Zea mays | BAA97662.1 | AB029454 | Triticum aestivum |
| AAC62396.1 | AF050756 | Zea mays | BAA97663.1 | AB029455 | Triticum aestivum |
| CAB09699.1 | Z397023 | Ricinus communis | CAA04993.1 | AJ001770 | Nicotiana tabacum |
| CAB09697.1 | Z397021 | Hordeum vulgare | CAA04992.1 | AJ001769 | Nicotiana tabacum |
| AAD10337.1 | U94591 | Hordeum vulgare | BAA97664.1 | AB029456 | Triticum aestivum |

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|-----------------|----------|-------------------------|-----------------|--|--------------------------------|
| AAG23802.1 | AF260736 | Cucurbita pepo | CAA52787.1 | X74783 | Lithospermum erythrorhizon |
| CAB66330.1 | AJ279688 | Betula pendula | AAD09278.1 | U97683 | Glycine max |
| BAA82155.1 | AB011441 | Triticum aestivum | AAG43469.1 | AF196964 | Bixa orellana |
| CAA06200.1 | AJ004900 | Glycine max | BAA09705.1 | D63389 | Cucumis sativus |
| | | | AAB47161.1 | S82272 | Gossypium barbadense |
| | | | | /gene="3-hydroxy-3-methylglutaryl coenzy | |
| SEQ ID NO. 2456 | | | reductase, . | This | |
| CAA48611.1 | X68652 | Raphanus sativus | AAA33359.1 | M74799 | Hevea brasiliensis |
| CAA48610.1 | X68651 | Raphanus sativus | AAC37432.1 | L34825 | Solanum tuberosum |
| AAC05089.1 | AF038046 | Gossypium hirsutum | AAC37434.1 | L34827 | Solanum tuberosum |
| AAA33108.1 | M96068 | Catharanthus roseus | AAC37431.1 | L34823 | Solanum tuberosum |
| AAB52551.1 | U51985 | Solanum tuberosum | AAC37433.1 | L34826 | Solanum tuberosum |
| AAB87727.1 | U60452 | Nicotiana tabacum | AAC37435.1 | L34828 | Solanum tuberosum |
| CAA70440.1 | Y09238 | Zea mays | AAC37436.1 | L34829 | Solanum tuberosum |
| CRA45181.1 | X63649 | Nicotiana sylvestris | | | |
| AAD28179.1 | AF110383 | Capsicum annuum | SEQ ID NO. 2459 | | Plastid Oryza sativa |
| AAB52552.1 | U51986 | Solanum tuberosum | CAA33932.1 | X15901 | |
| BAA93631.1 | AB022690 | Solanum tuberosum | | | |
| AAB62581.1 | U68072 | Lycopersicon esculentum | SEQ ID NO. 2460 | | |
| AAB69726.1 | U72145 | Camptotheca acuminata | CAA85362.1 | Z36894 | Solanum tuberosum |
| AAB53748.1 | U95816 | Oryza sativa | AAB88618.1 | AF034947 | Zea mays |
| BAB20771.1 | AB041031 | Solanum tuberosum | AAC78101.1 | AF093629 | Oryza sativa |
| AAB69727.1 | U72146 | Camptotheca acuminata | AAD46520.1 | AF149116 | Populus tremula x Populus |
| AAD47596.1 | AF142473 | Artemisia annua | tremuloides | | |
| AAA34169.1 | M63642 | Lycopersicon esculentum | AAF27918.1 | AF220202 | Malus x domestica |
| AAA68966.1 | U14625 | Artemisia annua | CAA12415.1 | AJ225172 | Solanum tuberosum |
| AAA33358.1 | M74798 | Hevea brasiliensis | AAC50012.1 | AF009675 | Hordeum vulgare var. distichum |
| AAA68965.1 | U14624 | Artemisia annua | AAB82136.1 | AF022733 | Oryza sativa |
| AAD08820.1 | U43961 | Oryza sativa | | | |
| AAA333360.1 | M74800 | Hevea brasiliensis | SEQ ID NO. 2462 | | |
| CAA92821.1 | Z68504 | Oryza sativa | BAA83711.1 | AB014484 | Nicotiana tabacum |
| AAC05088.1 | AF038045 | Gossypium hirsutum | AAF37579.1 | AF2335958 | Medicago sativa |
| AAC15475.1 | AF034760 | Tagetes erecta | CAA58117.1 | X82943 | Zea mays |
| AAC15476.1 | AF034761 | Tagetes erecta | CAA47868.1 | X67599 | Lycopersicon esculentum |
| CAA38469.1 | X54659 | Hevea brasiliensis | CAA47869.1 | X67600 | Lycopersicon peruvianum |
| CAA38467.1 | X54657 | Hevea brasiliensis | CAA47870.1 | X67601 | Lycopersicon peruvianum |
| AAD38873.1 | AF110382 | Oryza sativa | AAF74563.1 | AF208544 | Lycopersicon peruvianum |
| AAA33040.1 | L10390 | Camptotheca acuminata | CAA87080.1 | Z46956 | Glycine max |
| AAD03789.1 | U43711 | Morus alba | CAA87076.1 | Z46952 | Glycine max |
| AAC72378.1 | AF096838 | Solanum tuberosum | CAA39034.1 | X55347 | Lycopersicon peruvianum |
| AAB04043.1 | L40938 | Lycopersicon esculentum | BAA83710.1 | AB014483 | Nicotiana tabacum |
| CAA38468.1 | X54658 | Hevea brasiliensis | | | |

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| Accession | Species | SEQ ID NO. | Accession | Species | SEQ ID NO. |
|-----------------|-------------------|------------|-----------------|-----------------------------|------------|
| CAA65244.1 | Solanum tuberosum | X95997 | CAA73134.1 | Brassica oleracea | Y12531 |
| CAA57898.1 | Hordeum vulgare | X82548 | AAB93834.1 | Zea mays | U82481 |
| BBA13608.1 | Oryza sativa | D88399 | CAA67145.1 | Brassica oleracea | X98520 |
| CAA08995.1 | Brassica napus | AJ010091 | CAA73133.1 | Brassica oleracea | Y12530 |
| AAFI9401.1 | Glycine max | AF203479 | CAA74661.1 | Brassica oleracea | Y14285 |
| BAA05648.1 | Nicotiana tabacum | D26601 | AAA62232.1 | Brassica napus | U00443 |
| AAAD23582.1 | Glycine max | AF128443 | BAA92836.1 | Brassica oleracea | AB032473 |
| AAAD00239.1 | Nicotiana tabacum | U73938 | CAB41878.1 | Brassica oleracea | Y18259 |
| AAG60195.1 | Oryza sativa | AC084763 | AAC23542.1 | Ipomoea trifida | U20948 |
| | | | BAA23676.1 | Brassica rapa | AB000970 |
| | | | CAB41879.1 | Brassica oleracea | Y18260 |
| | | | AAA33000.1 | Brassica oleracea | M76647 |
| | | | AAA33008.1 | Brassica napus | M97667 |
| | | | CAB89179.1 | Brassica napus subsp. napus | AJ245479 |
| | | | CAA74662.1 | Brassica oleracea | Y14286 |
| | | | BAA06285.1 | Brassica rapa | D30049 |
| | | | BAA21132.1 | Brassica rapa | D88193 |
| | | | BAA07577.2 | Brassica rapa | D38564 |
| | | | CAA79355.1 | Brassica oleracea | Z18921 |
| | | | BAA07576.1 | Brassica rapa | D38563 |
| | | | BAB21001.1 | Brassica rapa | AB054061 |
| | | | BAA92837.1 | Brassica oleracea | AB032474 |
| | | | AAD21872.1 | Phaseolus vulgaris | AF078082 |
| | | | AAF34428.1 | Oryza sativa | AF172282 |
| | | | AAD52097.1 | Nicotiana tabacum | AF088885 |
| | | | | | |
| BAA94516.1 | Oryza sativa | AP001800 | | | |
| | | | | | |
| SEQ ID NO. 2509 | | | SEQ ID NO. 2510 | | |
| AAB48305.1 | Beta procumbens | U79733 | CAA77988.1 | Oryza sativa | Z11931 |
| | | | CAA62918.1 | Oryza sativa | X91808 |
| | | | AAC05719.1 | Eleusine indica | AF008122 |
| | | | CAA44863.1 | Zea mays | X63178 |
| | | | CAA67942.1 | Hordeum vulgare | X99623 |
| | | | AAA16225.1 | Zea mays | U05258 |
| | | | CAA44862.1 | Zea mays | X63177 |
| | | | CAB77671.1 | Miscanthus sinensis | AJ133709 |
| | | | CAA66075.1 | Avena sativa | X97446 |
| | | | CAB77672.1 | Miscanthus sinensis | AJ133710 |
| | | | CAA47635.1 | Prunus dulcis | X67162 |
| | | | BAA03955.1 | Chlorella vulgaris | D16504 |
| | | | AAA79910.1 | Pisum sativum | U12589 |
| | | | CAA48927.1 | Anemia phyllitidis | X69183 |
| | | | CAB66336.1 | Betula pendula | AJ279695 |
| | | | AAG02564.1 | Daucus carota | AY007250 |
| | | | CAA10663.1 | Hordeum vulgare | AJ132399 |
| | | | CAA06618.1 | Eleusine indica | AJ005598 |
| | | | AAC05717.1 | Eleusine indica | AF008120 |
| | | | BAB19779.1 | Nicotiana tabacum | AB052822 |
| | | | CAA33734.1 | Zea mays | X15704 |
| | | | CAA33733.1 | Zea mays | X15704 |
| | | | AAA99438.1 | Volvox carteri | L24546 |
| | | | CAA1326.1 | Volvox carteri | X12846 |
| | | | CAA69724.1 | Hordeum vulgare | Y08490 |
| | | | CAA06619.1 | Eleusine indica | AJ005599 |
| | | | AAA33095.1 | Chlamydomonas reinhardtii | M11447 |
| | | | AAC05718.1 | Eleusine indica | AF008121 |
| | | | AAB86648.1 | Chloromonas sp. AN73 | AF032877 |
| | | | AAB86649.1 | Chloromonas sp. AN71 | AF032876 |
| | | | AAD10486.1 | Triticum aestivum | U76558 |
| | | | AAG16905.1 | Oryza sativa | AF182523 |
| | | | AAA33098.1 | Chlamydomonas reinhardtii | M11448 |
| | | | CAA62916.1 | Oryza sativa | X91806 |
| | | | CAA62917.1 | Oryza sativa | X91807 |

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| AAB08791.1 | U40042 | Hordeum vulgare | BAA96421.1 | AB044084 | Triticum aestivum |
| CAA44861.1 | X63176 | Zea mays | CAB40189.1 | AJ133638 | Avena sativa |
| AAA33518.1 | M60171 | Zea mays | CAA67575.1 | X99134 | Lycopersicon esculentum |
| AAB84298.1 | AF030548 | Oryza sativa | CAA78387.1 | Z13997 | Petunia x hybrida |
| BAA92148.1 | AB038515 | Chlorella ellipsoidea | CAA66952.1 | X98308 | Lycopersicon esculentum |
| AAB36609.1 | U37794 | Eucalyptus globulus subsp. | CAA78388.1 | Z13998 | Petunia x hybrida |
| bicostata | | | CAA72218.1 | Y11415 | Oryza sativa |
| CAA48928.1 | X69184 | Anemia phyllitidis | BAA81736.1 | AB029165 | Glycine max |
| AAD11425.1 | AF097662 | Mesembryanthemum crystallinum | BAA81733.2 | AB029162 | Glycine max |
| CAB76917.1 | AJ276012 | Hordeum vulgare | BAA88224.1 | AB028652 | Nicotiana tabacum |
| CAA52158.1 | X73980 | Zea mays | BAA23341.1 | D88621 | Oryza sativa |
| BAA82638.1 | D63137 | Zinnia elegans | CAA50223.1 | X70878 | Hordeum vulgare |
| CAA38614.1 | X54845 | Pisum sativum | BAA88222.1 | AB028650 | Nicotiana tabacum |
| AAB64308.1 | U63927 | Daucus carota | CAA50226.1 | X70881 | Hordeum vulgare |
| AAA20186.1 | L10633 | Zea mays | CAA72217.1 | Y11414 | Oryza sativa |
| SEQ ID NO. 2511 | | | BAA88221.1 | AB028649 | Nicotiana tabacum |
| AAC32114.1 | AF051209 | Picea mariana | AB41101.1 | U72762 | Nicotiana tabacum |
| SEQ ID NO. 2514 | | | BAA88223.1 | AB028651 | Nicotiana tabacum |
| BAA84780.1 | AB018444 | Oryza sativa | BAB40790.1 | AB058642 | Lilium hybrid division I |
| BAA84779.1 | AB018443 | Oryza sativa | AAG28526.1 | AF198499 | Nicotiana tabacum |
| SEQ ID NO. 2515 | | | AAG28525.1 | AF198498 | Nicotiana tabacum |
| BAA85438.1 | AP000616 | Oryza sativa | CAA72187.1 | Y11352 | Oryza sativa |
| AAG43550.1 | AF211532 | Nicotiana tabacum | CAA78386.1 | Z13996 | Petunia x hybrida |
| BAA90357.1 | AP001080 | Oryza sativa | BAA81730.1 | AB029159 | Glycine max |
| SEQ ID NO. 2516 | | | BAA81731.1 | AB029160 | Glycine max |
| AAF67053.1 | AF190304 | Adiantum raddianum | SEQ ID NO. 2518 | | |
| AAF67052.1 | AF190303 | Adiantum raddianum | CAA62476.1 | X90990 | Solanum tuberosum |
| AAF67051.1 | AF190302 | Secale cereale | AAF66637.1 | AF143505 | Lycopersicon esculentum |
| AAF67050.1 | AF190301 | Secale cereale | CAA66616.1 | X97980 | Solanum berthaultii |
| AAG08959.1 | AF122051 | Solanum tuberosum | BAA96593.1 | AP002481 | Oryza sativa |
| AAG08960.1 | AF122052 | Solanum tuberosum | AAA50304.1 | M92989 | Pisum sativum |
| AAG08961.1 | AF122053 | Solanum tuberosum | CAA82993.1 | Z30332 | Spinacia oleracea |
| AAF34434.1 | AF172282 | Oryza sativa | CAA82994.1 | Z30333 | Mesembryanthemum crystallinum |
| CAA67000.1 | X98355 | Oryza sativa | CAA82992.1 | Z30331 | Mesembryanthemum crystallinum |
| AAG22863.1 | AY008692 | Hordeum vulgare | CAB82852.1 | Z30329 | Mesembryanthemum crystallinum |
| CAA61021.1 | X87690 | Hordeum vulgare | CAA50374.1 | X71057 | Nicotiana tabacum |
| RAD31395.1 | AF114162 | Lolium temulentum | CAA82991.1 | Z30330 | Spinacia oleracea |
| | | | AAD50585.1 | AF089099 | Salvia columbariae |
| | | | AAD50584.1 | AF089097 | Salvia columbariae |
| | | | BAB03409.1 | AP002816 | Oryza sativa |

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|-----------------|----------|-------------------------|-----------------|----------|-------------------------------|
| AAB93859.1 | U89678 | Lycopersicon esculentum | AAC04837.1 | AF032976 | Oryza sativa |
| AAD50586.1 | AF089100 | Salvia columbariae | AAD43972.1 | AF141879 | Oryza sativa |
| AAD50587.1 | AF089101 | Salvia columbariae | AAG00427.1 | AF250935 | Hordeum vulgare |
| AAB93861.1 | U89680 | Lycopersicon esculentum | AAG00426.1 | AF250934 | Hordeum vulgare |
| AAB93860.1 | U89679 | Lycopersicon esculentum | BAA86880.1 | AB028454 | Barbula unguiculata |
| AAD50588.1 | AF089102 | Salvia columbariae | AAC25777.1 | AF072694 | Oryza sativa |
| AAD50589.1 | AF089103 | Salvia columbariae | BAA78563.1 | AB024338 | Atriplex lentiformis |
| AAB93862.1 | U89681 | Lycopersicon esculentum | AAA34270.1 | M63223 | Triticum aestivum |
| AAB93863.1 | U89682 | Lycopersicon esculentum | AAC04834.1 | AF032973 | Oryza sativa |
| | | | AAA34268.1 | M21962 | Triticum aestivum |
| SEQ ID NO. 2521 | | Plastid Oryza sativa | AAG00428.1 | AF250936 | Hordeum vulgare |
| CAA33924.1 | X15901 | | AAA20245.1 | U01963 | Hordeum vulgare |
| | | | AAA34271.1 | M63224 | Triticum aestivum |
| SEQ ID NO. 2522 | | | AAG00429.1 | AF250937 | Hordeum vulgare |
| BAA01181.1 | D10335 | Oryza sativa | AAC99473.1 | AF039201 | Pinus caribaea |
| BAA01180.1 | D10334 | Oryza sativa | CAA71052.1 | Y09917 | Triticum aestivum |
| BAA94761.1 | AB041773 | Oryza sativa | AAA33030.1 | M93041 | Mesembryanthemum crystallinum |
| AAB68604.1 | U82330 | Prunus armeniaca | AAC05146.1 | AF049065 | Pinus radiata |
| AAF23372.1 | AF187063 | Oryza sativa | CAB65371.1 | AJ250834 | Pisum sativum |
| AAF23371.1 | AF187062 | Oryza sativa | CAB65370.1 | AJ250833 | Pisum sativum |
| AAD41679.1 | AF086603 | Ceratopteris richardii | CAA71050.1 | Y09915 | Triticum aestivum |
| BAA85443.1 | AP000616 | Oryza sativa | CAC34417.1 | AJ311624 | Pisum sativum |
| | | | AAA86365.1 | U21743 | Brassica napus |
| SEQ ID NO. 2523 | | | SEQ ID NO. 2524 | | |
| CAB65369.1 | AJ250832 | Pisum sativum | CAA90681.1 | Z50801 | Zea mays |
| AAF03355.1 | AF132671 | Nicotiana glauca | AAC14566.1 | AF058796 | Oryza sativa |
| AAC78470.1 | AF067731 | Solanum tuberosum | AAD27878.1 | AF139466 | Vigna radiata |
| BAB39965.1 | AP003018 | Oryza sativa | CAA45523.1 | X64198 | Nicotiana tabacum |
| BAB39980.1 | AP003020 | Oryza sativa | AAA34140.1 | M17633 | Lycopersicon esculentum |
| AAC04835.1 | AF032974 | Oryza sativa | AAF23819.1 | AF218305 | Hordeum vulgare |
| BAA25197.1 | AB012138 | Lycopersicon esculentum | AAA34186.1 | J03558 | Lycopersicon esculentum |
| AAC04833.1 | AF032972 | Oryza sativa | CAA41404.1 | X58514 | Pinus sylvestris |
| AAC04832.1 | AF032971 | Oryza sativa | CAA41405.1 | X58515 | Pinus sylvestris |
| CAB55394.1 | AL117264 | Oryza sativa | AAC67558.1 | AF094776 | Oryza sativa |
| AAB97470.1 | AF042489 | Oryza sativa | CAA65042.1 | X95727 | Brassica juncea |
| CAB55558.1 | AJ237942 | Triticum aestivum | AAF44702.1 | AF241524 | Asarina barclaiana |
| AAG00425.1 | AF250933 | Hordeum vulgare | AAA64415.1 | U23189 | Zea mays |
| CAA63659.1 | X93171 | Hordeum vulgare | AAA64414.1 | U23188 | Zea mays |
| CAB55559.1 | AJ237943 | Triticum aestivum | AAG28464.1 | AF195794 | Chlamydomonas reinhardtii |
| AAD43973.1 | AF141880 | Oryza sativa | CAA44777.1 | X63052 | Hordeum vulgare |
| AAD43971.1 | AF141878 | Oryza sativa | | | |

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| CAA32109.1 | X13909 | Oryza sativa |
| AAA68425.1 | M34396 | Polystichum munitum |
| CRA34459.1 | X16436 | Sinapis alba |
| CRA33903.1 | X15894 | Sinapis alba |
| CRA38635.1 | X54856 | Chlamydomonas moewusii |
| BAA00536.1 | D00641 | Oryza sativa |
| AAA80594.1 | U21114 | Solanum tuberosum |
| BAA32346.1 | AB013728 | Cryptomeria japonica |
| AFF89205.1 | AF279248 | Vigna radiata |
| AAD48017.1 | AF165529 | Rumex palustris |
| AAA33392.1 | M12152 | Lemna gibba |
| BAA00537.1 | D00642 | Oryza sativa |
| CRA32657.1 | X14505 | Pinus sylvestris |
| AAC34983.1 | AF039598 | Prunus persica |
| AAA34141.1 | M17558 | Lycopersicon esculentum |
| AAA34142.1 | M17559 | Lycopersicon esculentum |
| CAA31418.1 | X12980 | Glycine max |
| AFF89207.1 | AF279250 | Vigna radiata |
| CRA38025.1 | X54090 | Gossypium hirsutum |
| CRA28639.1 | X04966 | Petunia x hybrida |
| CAA40365.1 | X57082 | Pisum sativum |
| AFF89206.1 | AF279249 | Vigna radiata |
| ABA19040.1 | U51632 | Pinus palustris |
| CRA89823.1 | Z49749 | Pseudotsuga menziesii |
| SEQ ID NO. | 2529 | |
| AAB82766.1 | U89510 | Hordeum vulgare |
| AAB82767.1 | U89509 | Zea mays |
| AAB82764.1 | U89511 | Allium porrum |
| CAC19810.1 | AJ292343 | Solanum tuberosum |
| CAB52307.1 | AJ245634 | Solanum tuberosum |
| AAB09776.1 | L20485 | Hyoscyamus niger |
| BAA85845.1 | AB026545 | Hyoscyamus niger |
| AAA33282.1 | L20474 | Datura stramonium |
| CAA45866.1 | X64566 | Cuphea lanceolata |
| CAC34420.1 | AJ307584 | Solanum tuberosum |
| BAA13547.1 | D88156 | Hyoscyamus niger |
| BAA85844.1 | AB026544 | Hyoscyamus niger |
| AAA33281.1 | L20473 | Datura stramonium |
| AAA33280.1 | L20475 | Datura stramonium |
| SEQ ID NO. | 2530 | |
| AAC39333.1 | AF030052 | Oryza sativa subsp. japoni |
| AAD39534.2 | AF150630 | Gossypium hirsutum |
| SEQ ID NO. | 2531 | |
| AAG43043.1 | AY014277 | Lolium perenne |
| AAG43044.1 | AY014280 | Lolium perenne |
| CAA74331.1 | Y14008 | Triticum aestivum |
| CAA74330.1 | Y14007 | Triticum aestivum |
| SEQ ID NO. | 2532 | |
| AAD19839.1 | AF067602 | Clarkia concinna |
| AAC49395.1 | U58314 | Clarkia breweri |
| AAD19840.1 | AF067603 | Clarkia breweri |
| AAD19841.1 | AF067604 | Oenothera arizonica |
| AAD19838.1 | AF067601 | Clarkia breweri |
| SEQ ID NO. | 2533 | |
| BAA88183.1 | AP000836 | Oryza sativa |
| SEQ ID NO. | 2534 | |
| AAA50763.1 | U15605 | Nicotiana glutinosa |
| AAG43546.1 | AF211528 | Nicotiana tabacum |
| CAA08797.1 | AJ009719 | Solanum tuberosum |
| CAA08798.1 | AJ009720 | Solanum tuberosum |
| AAB47618.1 | U73916 | Linum usitatissimum |
| AAG09951.1 | AF175388 | Glycine max |
| AAG01052.1 | AF175395 | Glycine max |
| AAD25966.1 | AF093639 | Linum usitatissimum |
| AAD25969.1 | AF093642 | Linum usitatissimum |
| AAD25975.1 | AF093648 | Linum usitatissimum |
| AAD25965.1 | AF093638 | Linum usitatissimum |
| AAD25971.1 | AF093644 | Linum usitatissimum |
| AAD25970.1 | AF093643 | Linum usitatissimum |
| AAD25967.1 | AF093640 | Linum usitatissimum |
| AAD25974.1 | AF093647 | Linum usitatissimum |
| AAD25972.1 | AF093645 | Linum usitatissimum |
| CAC35331.1 | AJ310156 | Linum usitatissimum |
| CAC35323.1 | AJ310150 | Linum usitatissimum |
| AAD25968.1 | AF093641 | Linum usitatissimum |
| AAA91021.1 | U27081 | Linum usitatissimum |

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| AAA91022.1 | U27081 | Linum usitatissimum | CAA10175.1 | AJ012798 | Lycopersicon esculentum |
| AAG09954.1 | AF175399 | Glycine max | AAC77377.1 | AF064786 | Carica papaya |
| AAD25973.1 | AF093646 | Linum usitatissimum | CAA54525.1 | X77319 | Asparagus officinalis |
| CAC35327.1 | AJ310152 | Linum usitatissimum | AAC25984.1 | AF020390 | Lycopersicon esculentum |
| AAD25976.1 | AF093649 | Linum usitatissimum | CAA10173.1 | AJ012796 | Lycopersicon esculentum |
| AAG01051.1 | AF175394 | Glycine max | AAF70822.1 | AF154421 | Lycopersicon esculentum |
| CAC35336.1 | AJ310161 | Linum usitatissimum | CAA07236.1 | AJ006771 | Cicer arietinum |
| CAC35332.1 | AJ310157 | Linum usitatissimum | AAG12249.1 | AF184080 | Prunus armeniaca |
| CAC35328.1 | AJ310153 | Linum usitatissimum | CAA10064.1 | AJ012578 | Carica papaya |
| CAC35325.1 | AJ310150 | Linum usitatissimum | CAA06310.1 | AJ005043 | Cicer arietinum |
| AAK28810.1 | AF310964 | Linum usitatissimum | AAC28739.1 | AF079874 | Carica papaya |
| CAC35330.1 | AJ310155 | Linum usitatissimum | AAD45349.1 | AF159124 | Vitis vinifera |
| AAK28812.1 | AF310968 | Linum usitatissimum | SEQ ID NO. 2537 | | Chloroplast Nephroselmis |
| CAC35326.1 | AJ310151 | Linum usitatissimum | AAD54821.1 | AF137379 | |
| CAC35339.1 | AJ310164 | Linum usitatissimum | olivacea | | |
| CAC35321.1 | AJ310150 | Linum usitatissimum | AAF43860.1 | AF166114 | Chloroplast Mesostigma viride |
| CAC35337.1 | AJ310162 | Linum usitatissimum | AAAI8546.1 | M94204 | Nicotiana tabacum |
| CAC35329.1 | AJ310154 | Linum usitatissimum | CAA74893.1 | Y14561 | Pisum sativum |
| CAC35334.1 | AJ310159 | Linum usitatissimum | AAK08141.1 | AF234537 | Pelargonium graveolens |
| CAC35338.1 | AJ310163 | Linum usitatissimum | AAF15312.1 | AF145053 | Oryza sativa |
| CAC35333.1 | AJ310158 | Linum usitatissimum | AAG32661.1 | AF264877 | Zea mays |
| AAK28806.1 | AF310960 | Linum usitatissimum | CAA75382.1 | Y15108 | Glycine max |
| AAK28811.1 | AF310966 | Linum usitatissimum | SEQ ID NO. 2539 | | |
| AAK28809.1 | AF310962 | Linum usitatissimum | BAA07280.1 | D38091 | Triticum aestivum |
| AAK28803.1 | AF310958 | Linum usitatissimum | BAA07278.1 | D38089 | Triticum aestivum |
| AAK28804.1 | AF310959 | Linum usitatissimum | CAA64356.1 | X94693 | Triticum aestivum |
| AAK28808.1 | AF310961 | Linum usitatissimum | AAB66346.1 | AF013803 | Pinus taeda |
| AAK28805.1 | AF310960 | Linum usitatissimum | CAA48030.1 | X67819 | Picea abies |
| SEQ ID NO. 2536 | | Vigna radiata | AAA34249.1 | M31922 | Volvox carteri |
| AAF67342.1 | AF229795 | Vigna radiata | AAA34247.1 | M31921 | Volvox carteri |
| AAF67341.1 | AF229794 | Pyrus pyrifolia | AAA98453.1 | U16726 | Chlamydomonas reinhardtii |
| BAB21492.1 | AB046543 | Cicer arietinum | CAA07234.1 | AJ006768 | Cicer arietinum |
| CAA10128.1 | AJ012687 | Lycopersicon esculentum | AAA98451.1 | U16725 | Chlamydomonas reinhardtii |
| CAA10174.1 | AJ012797 | Lycopersicon esculentum | AAA98447.1 | U16724 | Chlamydomonas reinhardtii |
| AAF21626.1 | AF023847 | Lycopersicon esculentum | AAF65769.1 | AF242311 | Euphorbia esula |
| CAA09457.1 | AJ011010 | Cicer arietinum | AAB04687.1 | U08225 | Zea mays |
| CAA59162.1 | X84684 | Brassica oleracea | CAA37828.1 | X53831 | Petroselinum crispum |
| CAA06309.1 | AJ005042 | Cicer arietinum | BAA85117.1 | AB018242 | Solanum melongena |
| AAF70821.1 | AF154420 | Lycopersicon esculentum | BAA07276.1 | D38087 | Triticum aestivum |
| AAB61470.1 | AF004812 | Mangifera indica | | | |

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| BAA07279.1 | D38090 | Triticum aestivum | AAF63027.1 | AF244924 | Spinacia oleracea |
| BAA07277.1 | D38088 | Triticum aestivum | AAF63026.1 | AF244923 | Spinacia oleracea |
| AAA86947.1 | U10041 | Pisum sativum | BAA94962.1 | AB042103 | Asparagus officinalis |
| CAA64423.1 | X94973 | Triticum aestivum | BAA92500.1 | AP001383 | Oryza sativa |
| CAB53509.1 | AJ245999 | Brassica napus | AAF63025.1 | AF244922 | Spinacia oleracea |
| CAA65069.1 | X95763 | Allium cepa | CBA62615.1 | X91232 | Mercurialis annua |
| AAF07182.1 | AF193345 | Oryza sativa | BAA92422.1 | AP001366 | Oryza sativa |
| BAA96096.1 | AB003781 | Lilium longiflorum | BAA92497.1 | AP001383 | Oryza sativa |
| BAA96097.1 | AB003782 | Lilium longiflorum | CAB65334.1 | AJ250121 | Picea abies |
| CAB40356.1 | AJ010974 | Lilium longiflorum | CAB66037.1 | X97351 | Populus balsamifera subsp. |
| | | | trichocarpa | | |
| SEQ ID NO. 2541 | | | AAD43561.1 | AF155124 | Gossypium hirsutum |
| AAD26942.1 | AF119050 | Datisca glomerata | BAA82306.1 | AB027752 | Nicotiana tabacum |
| BAA05079.1 | D26086 | Petunia x hybrida | BAA06335.1 | D30653 | Populus kitakamiensis |
| AAC06243.1 | AF053077 | Nicotiana tabacum | CAA62226.1 | X90693 | Medicago sativa |
| BAA05077.1 | D26084 | Petunia x hybrida | CAB94692.1 | AJ242742 | Ipomoea batatas |
| BAA05076.1 | D26083 | Petunia x hybrida | AAD37430.1 | AF149280 | Phaseolus vulgaris |
| AAB53260.1 | U76554 | Brassica rapa | CAA62227.1 | X90694 | Medicago sativa |
| BAA05078.1 | D26085 | Petunia x hybrida | BAA07241.1 | D38051 | Populus kitakamiensis |
| AAB53261.1 | U76555 | Brassica rapa | BAA77389.1 | AB024439 | Scutellaria baicalensis |
| AAK01713.1 | AF332876 | Oryza sativa | BAA14143.1 | D90115 | Armoreria rusticana |
| BAA21920.1 | AB006598 | Petunia x hybrida | BAA06334.1 | D30652 | Populus kitakamiensis |
| BAA21922.1 | AB006600 | Petunia x hybrida | CAA71492.1 | Y10466 | Spinacia oleracea |
| BAA19112.1 | AB000453 | Petunia x hybrida | AAB02554.1 | L37790 | Stylosanthes humilis |
| BAA21927.1 | AB006605 | Petunia x hybrida | AAD37427.1 | AF149277 | Phaseolus vulgaris |
| BAA96071.1 | AB035133 | Petunia x hybrida | CAA66034.1 | X97348 | Populus balsamifera subsp. |
| BAA96070.1 | AB035132 | Petunia x hybrida | trichocarpa | | |
| BAA21919.1 | AB006597 | Petunia x hybrida | AAB97734.1 | AF014502 | Glycine max |
| BAA19114.1 | AB000455 | Petunia x hybrida | AAC05277.1 | AF049881 | Linum usitatissimum |
| BAA21921.1 | AB006599 | Petunia x hybrida | AAC49819.1 | AF014468 | Oryza sativa |
| BAA21928.1 | AB006606 | Petunia x hybrida | AAC98519.1 | AF007211 | Glycine max |
| BAA21925.1 | AB006603 | Petunia x hybrida | BAA11853.1 | D83225 | Populus nigra |
| BAA19111.1 | AB000452 | Petunia x hybrida | CAA59487.1 | X85230 | Triticum aestivum |
| BAA19926.1 | AB000456 | Petunia x hybrida | AAB41811.1 | L36157 | Medicago sativa |
| BAA21924.1 | AB006602 | Petunia x hybrida | BAA11852.1 | D83224 | Populus nigra |
| BAA21923.1 | AB006601 | Petunia x hybrida | CAA59485.1 | X85228 | Triticum aestivum |
| BAA21926.1 | AB006604 | Petunia x hybrida | CAA66036.1 | X97350 | Populus balsamifera subsp. |
| BAA19110.1 | AB000451 | Petunia x hybrida | trichocarpa | | |
| BAA19113.1 | AB000454 | Petunia x hybrida | CAA62225.1 | X90692 | Medicago sativa |
| | | | AAB41810.1 | L36156 | Medicago sativa |

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| CAA66035.1 | X97349 | Populus balsamifera subsp. trichocarpa | CAB55395.1 | AL117264 | Oryza sativa |
| AAB48986.1 | U16727 | Medicago truncatula | SEQ ID NO. 2550 | | |
| CAA62597.1 | X91172 | Raphanus sativus | BAB41080.1 | AB052729 | Pisum sativum |
| AAB47602.1 | L07554 | Linum usitatissimum | AAA34054.1 | M96432 | Nicotiana tabacum |
| CAB99487.1 | AJ276227 | Hordeum vulgare | AAA34085.1 | M93436 | Nicotiana tabacum |
| CAA37713.1 | X53675 | Triticum aestivum | SEQ ID NO. 2551 | | |
| BAA03911.1 | D16442 | Oryza sativa | CAA10494.1 | AJ131733 | Pseudotsuga menziesii |
| AAC49821.1 | AF014470 | Oryza sativa | AAA64427.1 | L29077 | Pisum sativum |
| BAA14144.1 | D90116 | Armoracia rusticana | AAA34125.1 | L23762 | Lycopersicon esculentum |
| AAA34108.1 | J02979 | Nicotiana tabacum | AAB88617.1 | AF034946 | Zea mays |
| SEQ ID NO. 2546 | | | AAD51109.1 | AF176040 | Mesembryanthemum crystallinum |
| AAF98368.1 | AF158027 | Nicotiana tabacum | CAA51821.1 | X73419 | Lycopersicon esculentum |
| AAD22170.1 | AF061282 | Sorghum bicolor | AAC12662.1 | AF032468 | Zea mays |
| AAD22169.1 | AF061282 | Sorghum bicolor | CAA05772.1 | AJ002959 | Zea mays |
| AAF98369.1 | AF158253 | Nicotiana tabacum | BAA90392.1 | AP001081 | Oryza sativa |
| CAA73328.1 | Y12793 | Cucumis sativus | BAB40310.1 | AB026055 | Nicotiana tabacum |
| AAK27797.1 | AF318315 | Vigna unguiculata | AAF73016.1 | AF262934 | Avicennia marina |
| AAK18751.1 | AF193067 | Vigna unguiculata | BAB40311.1 | AB026056 | Nicotiana tabacum |
| AAD22149.1 | AF061282 | Sorghum bicolor | AAA34310.1 | M62720 | Triticum aestivum |
| AAB08428.1 | U68484 | Nicotiana tabacum | AA02168.1 | U15971 | Oryza sativa |
| CAA11041.1 | AJ223038 | Hevea brasiliensis | AAD42941.1 | AF091621 | Catharanthus roseus |
| CAA11042.1 | AJ223039 | Hevea brasiliensis | AAA86089.1 | U17250 | Brassica oleracea |
| CAA27571.1 | X03932 | Solanum tuberosum | CAA58111.1 | X82938 | Lycopersicon esculentum |
| CAA25592.1 | X01125 | Solanum tuberosum | AAB63513.1 | AF008910 | Prunus armeniaca |
| AAA66198.1 | U09331 | Solanum brevifolius | BAA21006.1 | D17786 | Oryza sativa |
| CAA27588.1 | X03956 | Solanum tuberosum | AAF22280.1 | AF165420 | Mesembryanthemum crystallinum |
| AAA33819.1 | M18880 | Solanum tuberosum | AAC32141.1 | AF051240 | Picea mariana |
| CAA31576.1 | X13179 | Solanum tuberosum | SEQ ID NO. 2552 | | |
| AAA33828.1 | M21879 | Solanum tuberosum | AAG43405.1 | AF172931 | Picea abies |
| CAA31575.1 | X13178 | Solanum tuberosum | AAB37230.1 | U34743 | Phalaenopsis sp. SM9108 |
| CAA81735.1 | Z27221 | Solanum tuberosum | CAB51059.1 | Y17898 | Zea mays |
| AAB08427.1 | U68483 | Nicotiana tabacum | AAK19610.1 | AF336277 | Gossypium hirsutum |
| AAF98370.1 | AF158254 | Nicotiana tabacum | AAD38144.1 | AF139497 | Prunus armeniaca |
| AAK19055.1 | AF151219 | Solanum tuberosum | AAA63768.2 | AF339748 | Helianthus annuus |
| SEQ ID NO. 2547 | | | CAA64491.1 | X95193 | Pimpinella brachycarpa |
| AAA17740.1 | U08285 | Nicotiana tabacum | CAA64221.1 | X94449 | Pimpinella brachycarpa |
| BAA93021.1 | AP001552 | Oryza sativa | CAA64152.1 | X94375 | Pimpinella brachycarpa |
| BAA92501.1 | AP001383 | Oryza sativa | BAA93462.1 | AB028074 | Physcomitrella patens |

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| BAA93465.1 | AB028077 | Physcomitrella patens | CAB69824.1 | AJ271439 | Prunus persica |
| BAA93468.1 | AB028080 | Physcomitrella patens | CAA54046.1 | X76536 | Solanum tuberosum |
| CAA64417.1 | X94947 | Lycopersicon esculentum | AAB60276.1 | U09989 | Zea mays |
| CAA63222.1 | X92489 | Glycine max | CAB69823.1 | AJ271438 | Prunus persica |
| BAA93463.1 | AB028075 | Physcomitrella patens | AAK31799.1 | AY029190 | Lilium longiflorum |
| BAB18171.1 | AB042769 | Zinnia elegans | BAA37150.1 | AB022442 | Vicia faba |
| BAA93466.1 | AB028078 | Physcomitrella patens | CAC29435.1 | AJ310523 | Vicia faba |
| BAA93464.1 | AB028076 | Physcomitrella patens | CAB85495.1 | AJ132892 | Medicago truncatula |
| | | | CAB85494.1 | AJ132891 | Medicago truncatula |
| | | | AAD46187.1 | AF156683 | Nicotiana plumbaginifolia |
| | | | AAD29712.1 | AF140499 | Oryza sativa |
| | | Glycine max | AAK32118.1 | AF308816 | Hordeum vulgare |
| | | Glycine max | AAG01028.1 | AF289025 | Cucumis sativus |
| | | Brassica oleracea | AAF97591.1 | AF263917 | Lycopersicon esculentum |
| | | Mesembryanthemum crystallinum | AAA81348.1 | U38965 | Vicia faba |
| | | Oryza sativa | AAA20600.1 | U08984 | Zea mays |
| | | Lycopersicon esculentum | AAA20601.1 | U08985 | Zea mays |
| | | Lycopersicon esculentum | AAK32119.1 | AF308817 | Hordeum vulgare |
| | | Lycopersicon esculentum | | | |
| | | Dunaliella bioculata | | | |
| | | Zea mays | SEQ ID NO. 2555 | | |
| | | Oryza sativa | AAF01250.1 | AF188832 | Fragaria x ananassa |
| | | Nicotiana plumbaginifolia | CAA66900.2 | X98244 | Zea mays |
| | | Lycopersicon esculentum | AAD24540.1 | AF113545 | Nicotiana tabacum |
| | | Nicotiana plumbaginifolia | CAA10261.1 | AJ130956 | Capsicum annuum |
| | | Solanum tuberosum | CAA66901.1 | X98245 | Zea mays |
| | | Nicotiana plumbaginifolia | AAC33305.1 | U89609 | Gossypium hirsutum |
| | | Zea mays | AAC97494.1 | AF079232 | Lycopersicon esculentum |
| | | | AAB67994.1 | U73747 | Gossypium hirsutum |
| | | Oryza sativa | CAA75308.1 | Y15036 | Medicago truncatula |
| | | Vicia faba | CAA52903.1 | X74947 | Medicago sativa |
| | | Phaseolus vulgaris | AAC97493.1 | AF079231 | Lycopersicon esculentum |
| | | Mesembryanthemum crystallinum | CAB92956.1 | AJ401032 | Solanum tuberosum |
| | | Nicotiana plumbaginifolia | AAB71830.1 | AF006197 | Lavatera thuringiaca |
| | | Kosteletzkya virginica | CAA75213.1 | Y14972 | Nicotiana tabacum |
| | | Nicotiana plumbaginifolia | CAA76769.1 | Y17502 | Nicotiana tabacum |
| | | Lycopersicon esculentum | CAB63710.1 | X93308 | Capsicum annuum |
| | | Nicotiana plumbaginifolia | CAA75214.1 | Y14973 | Nicotiana tabacum |
| | | Lycopersicon esculentum | CAA76770.1 | Y17503 | Nicotiana tabacum |
| | | Lycopersicon esculentum | CAA10210.1 | AJ130829 | Capsicum annuum |
| | | Vicia faba | AAB67993.1 | U73746 | Gossypium hirsutum |
| | | Zostera marina | AAA79922.1 | U19941 | Fragaria x ananassa |
| | | Oryza sativa | | | |
| BAA93465.1 | AB028077 | Physcomitrella patens | | | |
| BAA93468.1 | AB028080 | Physcomitrella patens | | | |
| CAA64417.1 | X94947 | Lycopersicon esculentum | | | |
| CAA63222.1 | X92489 | Glycine max | | | |
| BAA93463.1 | AB028075 | Physcomitrella patens | | | |
| BAB18171.1 | AB042769 | Zinnia elegans | | | |
| BAA93466.1 | AB028078 | Physcomitrella patens | | | |
| BAA93464.1 | AB028076 | Physcomitrella patens | | | |
| SEQ ID NO. 2553 | | | | | |
| AAG28436.1 | AF195029 | | | | |
| AAG28435.1 | AF195028 | | | | |
| CAA68234.1 | X99972 | | | | |
| AAD31896.1 | AF145478 | | | | |
| BAA90510.2 | AF001111 | | | | |
| AAD11618.1 | AF050496 | | | | |
| AAD11617.1 | AF050495 | | | | |
| AAA34138.1 | M96324 | | | | |
| CAA63790.1 | X93592 | | | | |
| AAF73985.1 | AF096871 | | | | |
| AAB58910.1 | U82966 | | | | |
| AAD46188.1 | AF156691 | | | | |
| AAB17186.1 | U72148 | | | | |
| CAA47275.1 | X66737 | | | | |
| CAA54045.1 | X76535 | | | | |
| AAD46186.1 | AF156679 | | | | |
| CAA59800.1 | X85805 | | | | |
| BAA06629.1 | D31843 | | | | |
| CAA35314.2 | S79323 | | | | |
| CAA59799.1 | X85804 | | | | |
| AAB41898.1 | U84891 | | | | |
| AAA34094.1 | M80489 | | | | |
| AAB84202.2 | AF029256 | | | | |
| AAA34052.1 | M27888 | | | | |
| AAA34173.1 | M60166 | | | | |
| AAA34098.1 | M80490 | | | | |
| AAF98344.1 | AF275745 | | | | |
| AAD55399.1 | AF179442 | | | | |
| CAC29436.1 | AJ310524 | | | | |
| BAA08134.1 | D45189 | | | | |
| BAA01058.1 | D10207 | | | | |

| SEQ ID NO. | 2557 | 2558 | 2559 |
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| AAG32468.1 | AF308589 | Ceratopteris richardii | CAB08441.1 |
| CRA72183.1 | Y11348 | Medicago sativa | CAA42222.1 |
| AAG32467.1 | AF308588 | Ceratopteris richardii | BAA33062.1 |
| CAA06492.1 | AJ005347 | Cicer arietinum | AAB53310.1 |
| AAA73894.1 | L41393 | Malus x domestica | AAF34133.1 |
| SEQ ID NO. | 2557 | | AAA33671.1 |
| AAC79430.1 | AF067961 | Malus x domestica | AAB72109.1 |
| AAF01765.1 | AF184278 | Glycine max | AAB63311.1 |
| AAD37698.1 | AF145729 | Oryza sativa | CAA1546.1 |
| AAD37695.1 | AF145726 | Oryza sativa | AAD49336.1 |
| BAA93466.1 | AB028078 | Physcomitrella patens | AAC39360.1 |
| CRA64491.1 | X95193 | Pimpinella brachycarpa | CAA37848.1 |
| CAA64152.1 | X94375 | Pimpinella brachycarpa | AAA61632.1 |
| BAA93467.1 | AB028079 | Physcomitrella patens | CAA63903.1 |
| AAK31270.1 | AC079890 | Oryza sativa | CAA37864.1 |
| AAF19980.1 | AF211193 | Oryza sativa | CAB36910.1 |
| CAA06728.1 | AJ005833 | Craterostigma plantagineum | AAA33910.1 |
| CAA65456.2 | X96681 | Oryza sativa | CAA08908.1 |
| BAA05625.1 | D26576 | Daucus carota | AAA33909.1 |
| BAA93462.1 | AB028074 | Physcomitrella patens | CAA43210.1 |
| AAD37700.1 | AF145731 | Oryza sativa | AAC78392.1 |
| CAB67118.1 | Y17306 | Lycopersicon esculentum | CAA63902.1 |
| BAA93464.1 | AB028076 | Physcomitrella patens | BAA02160.1 |
| BAA21017.1 | D26578 | Daucus carota | CAA63901.1 |
| CAA64221.1 | X94449 | Pimpinella brachycarpa | CAA46641.1 |
| BAA93463.1 | AB028075 | Physcomitrella patens | AAB39856.1 |
| SEQ ID NO. | 2558 | | CAA63570.1 |
| AAB03893.1 | M11318 | Glycine max | AAC78394.1 |
| CAA41547.1 | X58711 | Medicago sativa | CAA63571.1 |
| AAD30454.1 | AF123257 | Lycopersicon esculentum | AAC78393.1 |
| CAA25578.1 | X01104 | Glycine max | CAA31785.1 |
| AAA33975.1 | M11395 | Glycine max | SEQ ID NO. |
| AAD30452.1 | AF123255 | Lycopersicon esculentum | 2559 |
| AAA33672.1 | M33899 | Pisum sativum | AAD37427.1 |
| CAA39603.1 | X56138 | Lycopersicon esculentum | BAA94962.1 |
| AAD30453.1 | AF123256 | Lycopersicon esculentum | BAA77388.1 |
| AAA33974.1 | M11317 | Glycine max | BAA92500.1 |
| CAA37847.1 | X53851 | Daucus carota | CAA66037.1 |
| CAB55634.2 | AJ237596 | Helianthus annuus | trichocarpa |
| | | | BAA82306.1 |
| | | | BAA92497.1 |
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| | | | CAA66037.1 |
| | | | trichocarpa |
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| | | | trichocarpa |
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| | | | CAA66037.1 |
| | | | trichocarpa |
| | | | BAA82306.1 |
| | | | BAA92497.1 |

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|-------------|----------|----------------------------|-----------------|----------|-----------------------------|
| BAA92422.1 | AP001366 | Oryza sativa | CAA62597.1 | X91172 | Raphanus sativus |
| AAC98519.1 | AF007211 | Glycine max | CAA71492.1 | Y10466 | Spinacia oleracea |
| BAA11853.1 | D83225 | Populus nigra | SEQ ID NO. 2560 | | |
| CAA62227.1 | X90694 | Medicago sativa | BAA03763.1 | D16247 | Nicotiana sylvestris |
| AAF63027.1 | AF244924 | Spinacia oleracea | AAF75791.1 | AF271892 | Pisum sativum |
| AAC49819.1 | AF014468 | Oryza sativa | AAF40306.1 | AF156667 | Vigna radiata |
| CAA62226.1 | X90693 | Medicago sativa | CAA68193.1 | X99937 | Spinacia oleracea |
| AAF63025.1 | AF244922 | Spinacia oleracea | AAD20980.1 | AF079782 | Zea mays |
| BAA77389.1 | AB024439 | Scutellaria baicalensis | BAA95705.1 | AB042644 | Oryza sativa |
| AAB48184.1 | L24120 | Linum usitatissimum | BAA95704.1 | AB042643 | Oryza sativa |
| CAA62615.1 | X91232 | Mercurialis annua | SEQ ID NO. 2561 | | |
| AAB06183.1 | M37636 | Arachis hypogaea | AAF36491.1 | AF129479 | Hordeum vulgare |
| AAD43561.1 | AF155124 | Gossypium hirsutum | BAB32442.1 | AB055629 | Phragmites australis |
| AAB02554.1 | L37790 | Stylosanthes humilis | BAB32445.1 | AB055632 | Phragmites australis |
| CAB94692.1 | AJ242742 | Ipomoea batatas | BAB32443.1 | AB055630 | Phragmites australis |
| AAF63026.1 | AF244923 | Spinacia oleracea | BAB32444.1 | AB055631 | Phragmites australis |
| CAR40796.1 | X57564 | Armoracia rusticana | AAF36497.1 | AF129485 | Oryza sativa |
| CAA71491.1 | Y10465 | Spinacia oleracea | AAF36496.1 | AF129484 | Hordeum vulgare |
| CAB65334.1 | AJ250121 | Picea abies | CAC15061.1 | AJ300161 | Hordeum vulgare |
| CAA59487.1 | X85230 | Triticum aestivum | AAF36492.1 | AF129480 | Hordeum vulgare |
| AA34050.1 | M74103 | Nicotiana sylvestris | SEQ ID NO. 2564 | | |
| AAC49821.1 | AF014470 | Oryza sativa | BAA92965.1 | AP001551 | Oryza sativa |
| BAA03911.1 | D16442 | Oryza sativa | SEQ ID NO. 2569 | | |
| CAA66034.1 | X97348 | Populus balsamifera subsp. | AAD21872.1 | AF078082 | Phaseolus vulgaris |
| trichocarpa | | | AAC23542.1 | U20948 | Ipomoea trifida |
| BAA06335.1 | D30653 | Populus kitakamiensis | CAA73134.1 | Y12531 | Brassica oleracea |
| AAB97734.1 | AF014502 | Glycine max | CAB41879.1 | Y18260 | Brassica oleracea |
| CAA71493.1 | Y10467 | Spinacia oleracea | CAA74661.1 | Y14285 | Brassica oleracea |
| AAB41810.1 | L36156 | Medicago sativa | CAB41878.1 | Y18259 | Brassica oleracea |
| AAB97853.1 | AF043234 | Striga asiatica | AAB93834.1 | U82481 | Zea mays |
| BAA92967.1 | AP001551 | Oryza sativa | CAA73133.1 | Y12530 | Brassica oleracea |
| AAB47602.1 | L07554 | Linum usitatissimum | CAA67145.1 | X98520 | Brassica oleracea |
| BAA06334.1 | D30652 | Populus kitakamiensis | AAA33000.1 | M76647 | Brassica oleracea |
| AAC49818.1 | AF014467 | Oryza sativa | CAA74662.1 | Y14286 | Brassica oleracea |
| BAA11852.1 | D83224 | Populus nigra | BAA23676.1 | AB000970 | Brassica rapa |
| CAA66035.1 | X97349 | Populus balsamifera subsp. | BAA92836.1 | AB032473 | Brassica oleracea |
| trichocarpa | | | CAB89179.1 | AJ245479 | Brassica napus subsp. napus |
| CAA62225.1 | X90692 | Medicago sativa | | | |
| BAA14144.1 | D90116 | Armoracia rusticana | | | |
| BAA07241.1 | D38051 | Populus kitakamiensis | | | |
| CAA46916.1 | X66125 | Oryza sativa | | | |

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|-----------------|----------|-------------------------|-----------------|----------|----------------------------|
| AAA33008.1 | M97667 | Brassica napus | BAA92500.1 | AP001383 | Oryza sativa |
| CAA79355.1 | Z18921 | Brassica oleracea | CAA62228.1 | X90695 | Medicago sativa |
| BAA21132.1 | D88193 | Brassica rapa | CAA40796.1 | X57564 | Armoracia rusticana |
| AAA62232.1 | U00443 | Brassica napus | AAD43561.1 | AF155124 | Gossypium hirsutum |
| BAA06285.1 | D30049 | Brassica rapa | CAA62615.1 | X91232 | Mercurialis annua |
| BAA92837.1 | AB032474 | Brassica oleracea | AAA65637.1 | L13654 | Lycopersicon esculentum |
| BAA07576.1 | D38563 | Brassica rapa | BAA14143.1 | D90115 | Armoracia rusticana |
| BAA07577.2 | D38564 | Brassica rapa | BAA01877.1 | D11102 | Populus kitakamiensis |
| BAB21001.1 | AB054061 | Brassica rapa | AAF63025.1 | AF244922 | Spinacia oleracea |
| AAD52097.1 | AF088885 | Nicotiana tabacum | CAB94692.1 | AJ242742 | Ipomoea batatas |
| AAK21965.1 | AY028699 | Brassica napus | CAA76374.2 | Y16776 | Spinacia oleracea |
| AA333915.1 | I27821 | Oryza sativa | AAB47602.1 | L07554 | Linum usitatissimum |
| BAA94509.1 | AB041503 | Populus nigra | AAB97734.1 | AF014502 | Glycine max |
| CAB51836.1 | AJ243961 | Oryza sativa | AAF63026.1 | AF244923 | Spinacia oleracea |
| AAG16628.1 | AY007545 | Brassica napus | CAB65334.1 | AJ250121 | Picea abies |
| BAA94510.1 | AB041504 | Populus nigra | AAA65636.1 | L13653 | Lycopersicon esculentum |
| AAG03090.1 | AC073405 | Oryza sativa | CAA66037.1 | X97351 | Populus balsamifera subsp. |
| | | | trichocarpa | | |
| SEQ ID NO. 2570 | | | BAA11853.1 | D83225 | Populus nigra |
| AAD11483.1 | U51193 | Glycine max | BAA01950.1 | D11337 | Vigna angularis |
| AAD11484.1 | U51194 | Glycine max | CAA80502.1 | Z22920 | Spirodela polyrrhiza |
| CAA76376.1 | Y16778 | Spinacia oleracea | AA98491.1 | L36981 | Petroselinum crispum |
| CAC21393.1 | AJ401276 | Zea mays | CAA66034.1 | X97348 | Populus balsamifera subsp. |
| AAF63027.1 | AF244924 | Spinacia oleracea | trichocarpa | | |
| AAA32676.1 | M37637 | Arachis hypogaea | CAC21391.1 | AJ401274 | Zea mays |
| CAA71495.1 | Y10469 | Spinacia oleracea | CAA71490.1 | Y10464 | Spinacia oleracea |
| BAA77387.1 | AB024437 | Scutellaria baicalensis | | | |
| BAA03644.1 | D14997 | Oryza sativa | SEQ ID NO. 2575 | | |
| BAA94962.1 | AB042103 | Asparagus officinalis | AAD17487.1 | AF049347 | Berberis stolonifera |
| CAA09881.1 | AJ011939 | Trifolium repens | AAB20352.1 | S65550 | Eschscholzia californica |
| CAA64413.1 | X94943 | Lycopersicon esculentum | AAC39358.1 | AF005655 | Eschscholzia californica |
| AAF63024.1 | AF244921 | Spinacia oleracea | AAC61839.1 | AF025430 | Papaver somniferum |
| BAA07664.1 | D42065 | Nicotiana tabacum | | | |
| BAA07663.1 | D42064 | Nicotiana tabacum | SEQ ID NO. 2577 | | |
| AAD11482.1 | U51192 | Glycine max | BAA76896.1 | AB022687 | Lycopersicon esculentum |
| BAA92497.1 | AP001383 | Oryza sativa | AAF97517.1 | AF250047 | Zea mays |
| BAA92422.1 | AP001366 | Oryza sativa | BAA76895.1 | AB022686 | Lycopersicon esculentum |
| AAD11481.1 | U51191 | Glycine max | | | |
| AAB48986.1 | U16727 | Medicago truncatula | SEQ ID NO. 2578 | | |
| AAB67737.1 | L77080 | Stylosanthes humilis | AAD21872.1 | AF078082 | Phaseolus vulgaris |
| AAB41812.1 | L36158 | Medicago sativa | AAB93834.1 | U82481 | Zea mays |

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| AAK31799.1 | AY029190 | Lilium longiflorum | BAA86059.1 | AB014456 | Pyrus pyrifolia |
| AAA34173.1 | M60166 | Lycopersicon esculentum | AAC49926.1 | AF000975 | Medicago sativa |
| CAC29435.1 | AJ310523 | Vicia faba | AAD38189.1 | AF154917 | Ocimum basilicum |
| AAF98344.1 | AF275745 | Lycopersicon esculentum | AAA18532.1 | L14063 | Zea mays |
| AAD55399.1 | AF179442 | Lycopersicon esculentum | AAC49928.1 | U97125 | Medicago sativa |
| CAA59800.1 | X85805 | Zea mays | AAC49927.1 | AF000976 | Medicago sativa |
| CAA54046.1 | X76536 | Solanum tuberosum | AAD38190.1 | AF154918 | Ocimum basilicum |
| AAA34052.1 | M27888 | Nicotiana plumbaginifolia | AAD29842.1 | AF064694 | Thalictrum tuberosum |
| CAA63790.1 | X93592 | Dunaliella bioculata | AAD29844.1 | AF064696 | Thalictrum tuberosum |
| AAB49042.1 | U54690 | Dunaliella acidophila | AAD29841.1 | AF064693 | Thalictrum tuberosum |
| CAA59799.1 | X85804 | Phaseolus vulgaris | AAC49856.1 | U69554 | Pisum sativum |
| BAA90510.2 | AP001111 | Oryza sativa | AAG43822.1 | AF212316 | Capsicum annuum |
| AAA34138.1 | M96324 | Lycopersicon esculentum | CAA52461.1 | X74452 | Nicotiana tabacum |
| AAD11617.1 | AF050495 | Lycopersicon esculentum | AAD29845.1 | AF064697 | Thalictrum tuberosum |
| CAA52107.1 | X73901 | Dunaliella bioculata | CAA52462.1 | X74453 | Nicotiana tabacum |
| AAD11618.1 | AF050496 | Lycopersicon esculentum | BAA08559.1 | D49711 | Populus kitakamiensis |
| AAD31896.1 | AF145478 | Mesembryanthemum crystallinum | AAB61731.1 | U13171 | Populus tremuloides |
| AAG28436.1 | AF195029 | Glycine max | CAA44006.1 | X62096 | Populus tremuloides |
| CAA68234.1 | X99972 | Brassica oleracea | AAC17455.1 | U83789 | Capsicum annuum |
| AAB58910.1 | U82966 | Oryza sativa | AAD29843.1 | AF064695 | Thalictrum tuberosum |
| AAA34099.1 | M80491 | Nicotiana plumbaginifolia | AAB68049.1 | U50522 | Populus tremuloides |
| AAA20600.1 | U08984 | Zea mays | AAC01533.1 | U86760 | Clarkia breweri |
| AAA20601.1 | U08985 | Zea mays | AAF60951.1 | M73431 | Populus x generosa |
| AAG01028.1 | AF289025 | Cucumis sativus | AAF63200.1 | AF237777 | Populus tomentosa |
| | | | BAA08558.1 | D49710 | Populus kitakamiensis |
| SEQ ID NO. 2581 | | | CAA52814.1 | X74814 | Eucalyptus gunnii |
| AAF70507.1 | AF259801 | Lycopersicon esculentum | AAB71141.1 | AF006009 | Clarkia breweri |
| AAC27714.1 | AF076954 | Zea mays | CAA54616.1 | X77467 | Hordeum vulgare |
| CAA78262.1 | Z12616 | Triticum aestivum | AAB46623.1 | M63853 | Medicago sativa |
| AAA34295.1 | M95818 | Triticum aestivum | AAC78475.1 | AF081214 | Capsicum chinense |
| AAA34296.1 | M95819 | Triticum aestivum | CAA58218.1 | X83217 | Prunus dulcis |
| AAC27715.1 | AF076955 | Zea mays | AA86718.1 | U19911 | Zinnia elegans |
| SEQ ID NO. 2582 | | | CAA13175.1 | AJ231133 | Saccharum officinarum |
| AAC49708.1 | U39301 | Pinus taeda | AAD10485.1 | U76384 | Triticum aestivum |
| AAB09044.1 | U70873 | Pinus radiata | AAD48913.1 | AF139533 | Liquidambar styraciflua |
| AAD24001.1 | AF119225 | Pinus radiata | AAC18623.1 | AF010291 | Lolium perenne |
| AAB71213.1 | U82011 | Prunus armeniaca | AAF44672.1 | AF239740 | Vitis vinifera |
| BAB08005.1 | D29812 | Coptis japonica | AAD50439.1 | AF168776 | Eucalyptus globulus |
| BAB08004.1 | D29811 | Coptis japonica | AAF28353.1 | AF220491 | Fragaria x ananassa |
| CAA11131.1 | AJ223151 | Prunus dulcis | AAB03364.1 | M73235 | Zea mays |
| | | | AA80579.1 | U16794 | Chrysosplenium americanum |

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| SEQ ID NO. 2590 | Lycopersicon esculentum | BAB17300.1 | AB0422260 | Zea mays |
| AAC78591.1 | Lycopersicon esculentum | BAB20582.1 | AB0422269 | Zea mays |
| AAC78596.1 | Lycopersicon esculentum | AAF323350.1 | AF219972 | Mesembryanthemum crystalli |
| AAC78593.1 | Lycopersicon esculentum | BAA75253.1 | AB004882 | Zea mays |
| AAC78595.1 | Lycopersicon esculentum | BAA85112.1 | AB031011 | Zea mays |
| AAC78597.1 | Lycopersicon esculentum | SEQ ID NO. 2596 | | |
| AAC78592.1 | Lycopersicon esculentum | AAD03693.1 | AF084554 | Brassica napus |
| CAA05276.1 | Lycopersicon pimpinellifolium | CAA10372.1 | AJ131455 | Plastid Solanum demissum |
| AAC78594.1 | Lycopersicon pimpinellifolium | CAA50750.1 | X71952 | Capsicum annuum |
| CAA05279.1 | Lycopersicon esculentum | SEQ ID NO. 2597 | | |
| CAA05268.1 | Lycopersicon hirsutum | AAG28600.1 | AF247134 | Limnanthes douglasii |
| CAA05274.1 | Lycopersicon pimpinellifolium | AAC49186.1 | U37088 | Simmondsia chinensis |
| AAA65235.1 | Lycopersicon pimpinellifolium | AAA96054.1 | U50771 | Brassica napus |
| BAB08215.1 | Oryza sativa | AAB72178.1 | AF009563 | Brassica napus |
| BAA96776.1 | Oryza sativa | AAK11266.1 | AF333040 | Dunaliella salina |
| AAD50430.1 | Hordeum vulgare | CAC17746.1 | AJ291728 | Zea mays |
| CAB55409.1 | Oryza sativa | AAC25110.1 | AF054498 | Brassica napus |
| SEQ ID NO. 2592 | Lycopersicon pennellii | AAC25109.1 | AF054497 | Brassica napus |
| AAB61598.1 | | AAC25112.1 | AF054500 | Brassica oleracea |
| SEQ ID NO. 2593 | Nicotiana tabacum | AAC25111.1 | AF054499 | Brassica rapa |
| AAK14408.1 | Nicotiana tabacum | SEQ ID NO. 2598 | | |
| AAC37400.1 | Vigna aconitifolia | BAA96751.1 | AP002521 | Oryza sativa |
| SEQ ID NO. 2594 | Pisum sativum | AAF74345.1 | AF150627 | Cucurbita moschata |
| AAC16330.1 | Nicotiana tabacum | CAA80364.1 | 222647 | Cucurbita maxima |
| BAB41076.1 | Pisum sativum | CAA78979.1 | 217331 | Cucurbita maxima |
| AAC16331.1 | Pisum sativum | CAB71030.1 | AJ271666 | Cicer arietinum |
| BAA31260.1 | Oryza sativa | CAB44031.1 | AJ010265 | Glycine max |
| SEQ ID NO. 2595 | Zea mays | BAA03704.1 | D63388 | Cucumis sativus |
| BAB41137.1 | Zea mays | SEQ ID NO. 2600 | | |
| BAB20580.1 | Zea mays | BAA21876.1 | AB006071 | Arabidopsis lyrata subsp. |
| BAB20579.1 | Zea mays | BAA21875.1 | AB006070 | Arabidopsis lyrata subsp. |
| BAB20581.1 | Zea mays | BAA21877.1 | AB006072 | Arabidopsis lyrata subsp. |
| BAB20582.1 | Zea mays | kawasakiana | | |
| BAB20583.1 | Zea mays | CAA92207.1 | Z68123 | Vitis vinifera |
| BAB20584.1 | Zea mays | AAG25709.1 | AF309514 | Malus x domestica |
| BAB20585.1 | Zea mays | BAA01948.1 | D11335 | Vigna angularis |
| BAB20586.1 | Zea mays | CAA77656.1 | Z11563 | Nicotiana tabacum |
| BAB20587.1 | Zea mays | | | |
| BAB20588.1 | Zea mays | | | |
| BAB20589.1 | Zea mays | | | |
| BAB20590.1 | Zea mays | | | |
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| BAB20600.1 | Zea mays | | | |
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| BAA77676.1 | AB007126 | Glycine max | BAB41022.1 | AB047095 | Vitis vinifera |
| BAA21743.2 | AB006188 | Oryza sativa | AAD21086.1 | AF127218 | Forsythia x intermedia |
| BAA77605.1 | AB026998 | Oryza sativa | BAB41020.1 | AB047093 | Vitis vinifera |
| AAB28479.1 | S66038 | Beta vulgaris | BAA19659.1 | AB002818 | Perilla frutescens |
| BAA77677.1 | AB007127 | Glycine max | BAB41018.1 | AB047091 | Vitis labrusca x Vitis vin. |
| CAB61280.1 | X88802 | Vigna unguiculata | AAB81683.1 | AF000372 | Vitis vinifera |
| BAA25015.1 | AB000097 | Glycine max | CAA54610.1 | X77460 | Manihot esculenta |
| CAB66334.1 | AJ279692 | Betula pendula | SEQ ID NO. 2613 | | |
| SEQ ID NO. 2606 | | | CAA12358.1 | AJ225027 | Cicer arietinum |
| CAA56125.1 | X79677 | Cuphea lanceolata | AAG13986.1 | AF298827 | Prunus avium |
| | | | CAA63960.1 | X94296 | Hordeum vulgare |
| SEQ ID NO. 2612 | | | SEQ ID NO. 2614 | | |
| CAA54609.1 | X77459 | Manihot esculenta | AAA87182.1 | U20808 | Vigna radiata |
| CAA54611.1 | X77461 | Manihot esculenta | | | |
| CAA54613.1 | X77463 | Manihot esculenta | SEQ ID NO. 2615 | | |
| CAA54612.1 | X77462 | Manihot esculenta | AAB70538.1 | AF017358 | Oryza sativa |
| AAB36653.1 | U32644 | Nicotiana tabacum | CAA65680.1 | X96979 | Hordeum vulgare |
| AAB36652.1 | U32643 | Nicotiana tabacum | AAF26451.1 | AF221503 | Pyrus communis |
| AAK28303.1 | AF346431 | Nicotiana tabacum | AAA70046.1 | U29176 | Oryza sativa |
| CAB56231.1 | Y18871 | Dortheanthus bellidiformis | AAF28385.1 | AF151214 | Nicotiana glauca |
| AAK28304.1 | AF346432 | Nicotiana tabacum | BAA23548.1 | AB007843 | Picea abies |
| CAA59450.1 | X85138 | Lycopersicon esculentum | AAK01293.1 | AF331710 | Avicennia marina |
| AAF17077.1 | AF199453 | Sorghum bicolor | BAA96206.1 | AP002094 | Oryza sativa |
| BAA83484.1 | AB031274 | Scutellaria baicalensis | AAA86694.1 | U18127 | Hordeum vulgare |
| AAF61647.1 | AF190634 | Nicotiana tabacum | CAA41946.1 | X59253 | Hordeum vulgare |
| BAA89008.1 | AB027454 | Petunia x hybrida | CAA44267.1 | X62395 | Nicotiana tabacum |
| BAA93039.1 | AB033758 | Citrus unshiu | CAA48621.1 | X68654 | Hordeum vulgare |
| BAA36423.1 | AB013598 | Verbena x hybrida | AAG27707.1 | AF302788 | Triticum aestivum |
| BAA89009.1 | AB027455 | Petunia x hybrida | CAA85484.1 | Z37115 | Hordeum vulgare |
| AAB48444.1 | U82367 | Solanum tuberosum | AAC63372.1 | AF093751 | Brassica oleracea |
| AAD04166.1 | AF101972 | Phaseolus lunatus | AAA73945.1 | L33904 | Brassica oleracea |
| AAD55985.1 | AF165148 | Petunia x hybrida | AAB05812.1 | U63993 | Hordeum vulgare |
| CAA54614.1 | X77464 | Manihot esculenta | AAB70540.1 | AF017360 | Oryza sativa |
| BAB41023.1 | AB047096 | Vitis vinifera | CAA91436.1 | Z66529 | Hordeum vulgare |
| BAB41025.1 | AB047098 | Vitis vinifera | CAA91435.1 | Z66528 | Hordeum vulgare |
| BAB41021.1 | AB047094 | Vitis vinifera | AAK20395.1 | AF334185 | Triticum aestivum |
| BAB41019.1 | AB047092 | Vitis vinifera | AAB80805.1 | U90342 | Pinus radiata |
| BAB41026.1 | AB047099 | Vitis vinifera | CAA50661.1 | X71668 | Sorghum bicolor |
| BAB41024.1 | AB047097 | Vitis vinifera | CAA50660.1 | X71667 | Sorghum bicolor |
| BAA12737.1 | D85186 | Gentiana triflora | | | |

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| AAC49860.1 | U72765 | Phaseolus vulgaris | AAAD10495.1 | U86763 | Triticum aestivum |
| AAF71695.1 | AF198168 | Aerides japonica | AAK26848.1 | AF342809 | Zea mays |
| CAA69949.1 | Y08691 | Oryza sativa | SEQ ID NO. 2620 | | |
| AAAB18815.1 | U77295 | Oryza sativa | CAA53076.1 | X75327 | Pisum sativum |
| AAAT74624.1 | U31766 | Oryza sativa | AAB47571.1 | U87848 | Nicotiana plumbaginifolia |
| AAAB70541.1 | AF017361 | Oryza sativa | AAF08296.1 | AF196292 | Apium graveolens |
| AAF26450.1 | AF221502 | Malus x domestica | CAA53075.1 | X75326 | Zea mays |
| AAF14232.1 | AF109195 | Hordeum vulgare | BAB18543.1 | AB043539 | Avicennia marina |
| AAF23459.1 | AF208833 | Capsicum annuum | AAAB58165.1 | AF000132 | Amaranthus hypochondriacus |
| AAAB70539.1 | AF017359 | Oryza sativa | BAB18544.1 | AB043540 | Avicennia marina |
| AAA73947.1 | I33906 | Brassica oleracea | BAA21098.1 | AB001348 | Oryza sativa |
| AAA33493.1 | J04176 | Zea mays | AAAB70010.1 | AF017150 | Amaranthus hypochondriacus |
| CAA65475.1 | X96714 | Prunus dulcis | AAA34025.1 | M31480 | Spinacia oleracea |
| CAA48623.1 | X68656 | Hordeum vulgare | AAAB41696.1 | U69142 | Spinacia oleracea |
| CAA80809.1 | Z23271 | Oryza sativa | CAA41376.1 | X58462 | Beta vulgaris |
| CAA50662.1 | X71669 | Sorghum bicolor | CAA41377.1 | X58463 | Beta vulgaris |
| AAAB06443.1 | U66105 | Zea mays | CAA49425.1 | X69770 | Atriplex hortensis |
| SEQ ID NO. 2617 | | | CAA71003.1 | Y09876 | Nicotiana tabacum |
| AAAB51393.1 | U92651 | Brassica oleracea var. botrytis | AAF73828.1 | AF162665 | Oryza sativa |
| AAD39372.1 | AF118381 | Brassica napus | BAB19052.1 | AB044537 | Oryza sativa |
| BAB12722.1 | AB048248 | Pyrus communis | AAG43988.1 | AF215823 | Zea mays |
| CAC01618.1 | AJ251652 | Medicago truncatula | BAA96794.1 | AB037421 | Oryza sativa |
| AAF82790.1 | AF275315 | Lotus japonicus | BAA96793.1 | AB030939 | Oryza sativa |
| AAC04846.1 | AF020793 | Medicago sativa | BAA05466.1 | D26448 | Hordeum vulgare |
| CAA69353.1 | Y08161 | Medicago sativa | AAC49268.1 | U12196 | Sorghum bicolor |
| AAC09245.1 | AF037061 | Nicotiana tabacum | AAC03055.1 | AF045770 | Oryza sativa |
| AAD10494.1 | U86762 | Zea mays | AAAB33843.1 | S77096 | Brassica napus |
| AAAB17284.1 | U43291 | Triticum aestivum | AAAG43027.1 | AF323586 | Oryza sativa |
| AAK26767.1 | AF326500 | Mesembryanthemum crystallinum | AAAC49267.1 | U12195 | Sorghum bicolor |
| CAA64952.1 | X95650 | Zea mays | SEQ ID NO. 2622 | | |
| CAA06335.1 | AJ005078 | Tulipa gesneriana | AAF74981.1 | AF082891 | Chloroplast Solanum tuberosum |
| AAAB51394.1 | U92652 | Picea abies | AAD31520.2 | AF144102 | Solanum tuberosum |
| AAAB04557.1 | U62778 | Brassica oleracea var. botrytis | CAB57356.1 | Y17185 | Fragaria vesca |
| CAA65185.1 | X95951 | Gossypium hirsutum | AAF74982.1 | AF082892 | Chloroplast Solanum tuberosum |
| CAA65184.1 | X95950 | Helianthus annuus | AAD34548.1 | AF141602 | Glycine max |
| AAC39480.1 | AF047173 | Helianthus annuus | AAC19395.1 | AF069317 | Mesembryanthemum crystallinum |
| CAA65187.1 | X95953 | Vernicia fordii | AAAB61348.1 | AF007786 | Zea mays |
| AAK26769.1 | AF326502 | Helianthus annuus | AAAB61347.1 | AF007785 | Zea mays |
| CAA65186.1 | X95952 | Zea mays | AAAD16143.1 | AF097180 | Nicotiana tabacum |
| AAK26768.1 | AF326501 | Helianthus annuus | | | |

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| AA031849.1 | AF133533 | Mesembryanthemum crystallinum | CAA72186.1 | Y11351 | Oryza sativa |
| AA031848.1 | AF133532 | Mesembryanthemum crystallinum | CAA67600.1 | X99210 | Lycopersicon esculentum |
| BAA12711.1 | D84669 | Raphanus sativus | BAA88222.1 | AB028650 | Nicotiana tabacum |
| AA082790.1 | AF275315 | Lotus japonicus | CAA72217.1 | Y11414 | Oryza sativa |
| AA009245.1 | AF037061 | Zea mays | BAA23339.1 | D88619 | Oryza sativa |
| AAK26767.1 | AF326500 | Zea mays | CAA75509.1 | Y15219 | Oryza sativa subsp. indica |
| CAC01618.1 | AJ251652 | Medicago truncatula | CAA65525.1 | X96749 | Oryza sativa |
| AA017284.1 | U43291 | Mesembryanthemum crystallinum | AA041101.1 | U72762 | Nicotiana tabacum |
| AA031847.1 | AF133531 | Mesembryanthemum crystallinum | CAA72185.1 | Y11350 | Oryza sativa |
| SEQ ID NO. 2635 | | | SEQ ID NO. 2642 | | |
| BAA77836.1 | AB027456 | Citrus unshiu | AA041741.1 | U82558 | Lycopersicon esculentum |
| SEQ ID NO. 2636 | | | SEQ ID NO. 2643 | | |
| AAK19619.1 | AF336286 | Gossypium hirsutum | AA041742.1 | U82559 | Lycopersicon esculentum |
| CAA64614.1 | X95296 | Lycopersicon esculentum | AA041741.1 | U82558 | Lycopersicon esculentum |
| CAA50221.1 | X70876 | Hordeum vulgare | SEQ ID NO. 2644 | | |
| CAA50224.1 | X70879 | Hordeum vulgare | CAA73134.1 | Y12531 | Brassica oleracea |
| CAA50222.1 | X70877 | Hordeum vulgare | AA093834.1 | U82481 | Zea mays |
| BAA23337.1 | D88617 | Oryza sativa | CAA67145.1 | X98520 | Brassica oleracea |
| BAA23338.1 | D88618 | Oryza sativa | CAA74661.1 | Y14285 | Brassica oleracea |
| CAA72218.1 | Y11415 | Oryza sativa | CAA73133.1 | Y12530 | Brassica oleracea |
| AAK19611.1 | AF336278 | Gossypium hirsutum | AA062232.1 | U00443 | Brassica napus |
| CAA78386.1 | Z13996 | Petunia x hybrida | CAB89179.1 | AJ245479 | Brassica napus subsp. napus |
| CAA50225.1 | X70880 | Hordeum vulgare | AA033008.1 | M97667 | Brassica napus |
| AAK19618.1 | AF336285 | Gossypium hirsutum | BAA92836.1 | AB032473 | Brassica oleracea |
| AAK19616.1 | AF336283 | Gossypium hirsutum | BAA23676.1 | AB000970 | Brassica rapa |
| AAK19615.1 | AF336282 | Gossypium hirsutum | AA023542.1 | U20948 | Ipomoea trifida |
| AA022256.1 | AF161711 | Pimpinella brachycarpa | AA033000.1 | M76647 | Brassica oleracea |
| AAK19617.1 | AF336284 | Gossypium hirsutum | BAA21132.1 | D88193 | Brassica rapa |
| CAA78387.1 | Z13997 | Petunia x hybrida | BAA06285.1 | D30049 | Brassica rapa |
| CAB43399.1 | AJ006292 | Antirrhinum majus | CAB41879.1 | Y18260 | Brassica oleracea |
| BAA81732.1 | AB029161 | Glycine max | BAA07577.2 | D38564 | Brassica rapa |
| BAA81731.1 | AB029160 | Glycine max | CAA74662.1 | Y14286 | Brassica oleracea |
| BAA81730.1 | AB029159 | Glycine max | BAB21001.1 | AB054061 | Brassica rapa |
| BAA88224.1 | AB028652 | Nicotiana tabacum | BAA92837.1 | AB032474 | Brassica oleracea |
| BAA88221.1 | AB028649 | Nicotiana tabacum | CAB41878.1 | Y18259 | Brassica oleracea |
| AAA33500.1 | M73028 | Zea mays | CAA79355.1 | Z18921 | Brassica oleracea |
| AAG36774.1 | AF210616 | Zea mays | BAA07576.1 | D38563 | Brassica rapa |
| BAA81736.1 | AB029165 | Glycine max | AA034428.1 | AF172282 | Oryza sativa |
| BAA81733.2 | AB029162 | Glycine max | | | |

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|------------|----------|--------------------|-----------------|----------|----------------------------|
| AA021872.1 | AA078082 | Phaseolus vulgaris | AA047996.1 | U87982 | Sorghum bicolor |
| AA052097.1 | AA088885 | Nicotiana tabacum | BAB19052.1 | AB044537 | Oryza sativa |
| BAA94516.1 | AP001800 | Oryza sativa | AA073828.1 | AF162665 | Oryza sativa |
| BAA94517.1 | AP001800 | Oryza sativa | BAA21098.1 | AB001348 | Oryza sativa |
| AAA33915.1 | I27821 | Oryza sativa | AAG43988.1 | AF215823 | Zea mays |
| BAA94529.2 | AP001800 | Oryza sativa | CAA41377.1 | X58463 | Beta vulgaris |
| | | | CAA41376.1 | X58462 | Beta vulgaris |
| | | | AAA34025.1 | M31480 | Spinacia oleracea |
| | | | AA041696.1 | U69142 | Spinacia oleracea |
| | | | BAA96793.1 | AB030939 | Oryza sativa |
| | | | CAA71003.1 | Y09876 | Nicotiana tabacum |
| | | | AA070010.1 | AF017150 | Amaranthus hypochondriacus |
| | | | BAB18544.1 | AB043540 | Avicennia marina |
| | | | BAB18543.1 | AB043539 | Avicennia marina |
| | | | AA058165.1 | AF000132 | Amaranthus hypochondriacus |
| | | | BAA96794.1 | AB037421 | Oryza sativa |
| | | | CAA49425.1 | X69770 | Atriplex hortensis |
| | | | BAA05466.1 | D26448 | Hordeum vulgare |
| | | | AA049268.1 | U12196 | Sorghum bicolor |
| | | | CAA53075.1 | X75326 | Zea mays |
| | | | AA030355.1 | AF045770 | Oryza sativa |
| | | | AA03076.1 | X75327 | Pisum sativum |
| | | | AA047571.1 | U87848 | Nicotiana plumbaginifolia |
| | | | AA08296.1 | AF196292 | Apium graveolens |
| | | | AA049267.1 | U12195 | Sorghum bicolor |
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| | | | SEQ ID NO. 2649 | | |
| | | | CAB56570.1 | AJ011623 | Antirrhinum majus |
| | | | CAB56568.1 | AJ011621 | Antirrhinum majus |
| | | | CAB56569.1 | AJ011622 | Antirrhinum majus |
| | | | CAA63113.1 | X92369 | Antirrhinum majus |
| | | | AA051071.1 | U89496 | Zea mays |
| | | | CAA63061.1 | X92079 | Antirrhinum majus |
| | | | | | |
| | | | SEQ ID NO. 2651 | | |
| | | | AA013527.1 | AC068924 | Oryza sativa |
| | | | CAA55326.1 | X78589 | Chlamydomonas reinhardtii |
| | | | AA037756.1 | L46702 | Solanum tuberosum |
| | | | AA049393.1 | U52078 | Nicotiana tabacum |
| | | | AA013460.1 | AF223412 | Zea mays |
| | | | BB040709.1 | AB003037 | Nicotiana tabacum |
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| BAA36421.1 | AB013596 | Perilla frutescens | BAA03439.1 | D14589 | Eustoma grandiflorum |
| BAA36422.1 | AB013597 | Perilla frutescens | AAG49315.1 | AF315465 | Pelargonium x hortorum |
| BAA12737.1 | D85186 | Gentiana triflora | AAC39452.1 | AF014800 | Eschscholzia californica |
| BAB41024.1 | AB047097 | Vitis vinifera | CAA50648.1 | X71657 | Solanum melongena |
| BAB41026.1 | AB047099 | Vitis vinifera | AAC39453.1 | AF014801 | Eschscholzia californica |
| BAB41020.1 | AB047093 | Vitis vinifera | BAA12735.1 | D85184 | Gentiana triflora |
| BAB41022.1 | AB047095 | Vitis vinifera | AAF05621.1 | AF191772 | Papaver somniferum |
| AAD21086.1 | AF127218 | Forsythia x intermedia | SEQ ID NO. 2672 | | |
| BAB41025.1 | AB047098 | Vitis vinifera | AAC48922.1 | U06047 | Vigna radiata |
| BAB41023.1 | AB047096 | Vitis vinifera | | | |
| BAB41021.1 | AB047094 | Vitis vinifera | SEQ ID NO. 2673 | | |
| BAB41019.1 | AB047092 | Vitis vinifera | BAA93453.1 | AB026495 | Petunia x hybrida |
| BAB41018.1 | AB047091 | Vitis labrusca x Vitis vinifera | BAA74428.1 | AB010708 | Gentiana triflora |
| AAB81683.1 | AF000372 | Vitis vinifera | BAA96577.1 | AP002480 | Oryza sativa |
| AAB81682.1 | AF000371 | Vitis vinifera | BAA93452.1 | AB026494 | Gentiana triflora |
| BAB41017.1 | AB047090 | Vitis labrusca x Vitis vinifera | BAA93475.1 | AB029340 | Perilla frutescens |
| BAA19659.1 | AB002818 | Perilla frutescens | AAG13130.1 | AF193789 | Fragaria x ananassa |
| AAB48444.1 | U82367 | Solanum tuberosum | | | |
| AAB36652.1 | U32643 | Nicotiana tabacum | SEQ ID NO. 2674 | | |
| AAK28304.1 | AF346432 | Nicotiana tabacum | AAF19807.1 | AF180356 | Brassica oleracea |
| AAB36653.1 | U32644 | Nicotiana tabacum | BAA92986.1 | AP001550 | Oryza sativa |
| AAK28303.1 | AF346431 | Nicotiana tabacum | AAF19403.1 | AF203481 | Lycopersicon esculentum |
| BAB90787.1 | AB038248 | Ipomoea batatas | AAF19402.1 | AF203480 | Lycopersicon esculentum |
| CAA54612.1 | X77462 | Manihot esculenta | BAA05648.1 | D26601 | Nicotiana tabacum |
| BAB89008.1 | AB027454 | Petunia x hybrida | AAF23900.1 | AF194413 | Oryza sativa |
| CAA54614.1 | X77464 | Manihot esculenta | AAF23901.2 | AF194414 | Oryza sativa |
| | | | CAA89202.1 | Z49233 | Chlamydomonas eugametos |
| SEQ ID NO. 2669 | | | BAA13440.1 | D87707 | Ipomoea batatas |
| AAD56282.1 | AF155332 | Petunia x hybrida | AAF21062.1 | AF216527 | Dunaliella tertiolecta |
| BAB20076.1 | AB012925 | Torenia hybrida | BAA85396.1 | AP000615 | Oryza sativa |
| CAA80266.1 | Z22545 | Petunia x hybrida | AAC05270.1 | AF048691 | Oryza sativa |
| BAA03438.1 | D14588 | Petunia x hybrida | AAC04324.1 | U73937 | Nicotiana tabacum |
| AAC32274.1 | AF081575 | Petunia x hybrida | CAA73067.1 | Y12464 | Sorghum bicolor |
| CAA09850.1 | AJ011862 | Catharanthus roseus | CAA57156.1 | X81393 | Oryza sativa |
| AAG49299.1 | AF313489 | Callistephus chinensis | AAG36872.1 | AF239819 | Zea mays |
| AAG49300.1 | AF313490 | Lycianthes rantonnei | AAD17800.1 | AF090835 | Mesembryanthemum crystallinum |
| CAA50155.1 | X70824 | Solanum melongena | CAA43659.1 | X61387 | Zea mays |
| BAA03440.1 | D14590 | Campanula medium | AAF76187.1 | AF271237 | Zea mays |
| CAA80265.1 | Z22544 | Petunia x hybrida | BAB21591.1 | AB036788 | Oryza sativa |
| AAB17562.1 | U72654 | Eustoma grandiflorum | BAB21589.1 | AB036786 | Oryza sativa |
| AAG49301.1 | AF313491 | Matthiola incana | | | |

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| AAC31592.1 | AY029178 | Brassica rapa subsp. pekinensis | AAC39358.1 | AF005655 | Eschscholzia californica |
| AAG33645.1 | AF092917 | Vicia sativa | AAD17487.1 | AF049347 | Berberis stolonifera |
| AAD10204.1 | AF030260 | Vicia sativa | SEQ ID NO. 2688 | | |
| CAB41474.1 | AJ238402 | Catharanthus roseus | BAA13524.1 | D87984 | Fagopyrum esculentum |
| AAB94586.1 | AF022457 | Glycine max | BAB20886.1 | AB053294 | Oryza sativa |
| CAA89260.1 | Z49263 | Pisum sativum | AAF88067.1 | AF286593 | Triticum aestivum |
| AAD56282.1 | AF155332 | Petunia x hybrida | CAA05081.1 | AJ001903 | Triticum turgidum subsp. d |
| CAA70575.1 | Y09423 | Nepeta racemosa | CAA41415.1 | X58527 | Nicotiana tabacum |
| CAA50155.1 | X70824 | Solanum melongena | AAB53694.1 | U59379 | Brassica napus |
| AAA32913.1 | M32885 | Persea americana | BAA25681.1 | AB010434 | Brassica rapa |
| BAA22423.1 | AB001380 | Glycyrrhiza echinata | BAA04864.1 | D21836 | Oryza sativa |
| AAB94588.1 | AF022459 | Glycine max | AAB51522.1 | U92541 | Oryza sativa |
| BAA74466.1 | AB022733 | Glycyrrhiza echinata | BAA05546.1 | D26547 | Oryza sativa |
| AAB94592.1 | AF022463 | Glycine max | AAC32111.1 | AF051206 | Picea mariana |
| BAA84072.1 | AB028152 | Torenia hybrida | AAG35777.1 | AF273844 | Brassica oleracea var. |
| BAA12159.1 | D83968 | Glycine max | alboglabra | | |
| AAA17732.1 | L19074 | Catharanthus roseus | AAB53695.1 | U59380 | Brassica napus |
| SEQ ID NO. 2683 | | | CAA94534.1 | Z70677 | Ricinus communis |
| CAA84230.1 | Z34465 | Zea mays | CAA77847.1 | Z11803 | Nicotiana tabacum |
| AAD55979.1 | AF159296 | Lycopersicon esculentum | BAB39913.1 | AP002912 | Oryza sativa |
| AAD55980.1 | AF159297 | Zea mays | AAD49230.1 | AF159385 | Hordeum bulbosum |
| SEQ ID NO. 2684 | | | AAD49231.1 | AF159386 | Secale cereale |
| CAB45652.1 | AJ243308 | Pisum sativum | AAD49234.1 | AF159389 | Phalaris coerulescens |
| CAA28471.1 | X04782 | Glycine max | AAD49233.1 | AF159388 | Phalaris coerulescens |
| BAB12437.1 | AB027468 | Adiantum capillus-veneris | AAD33596.1 | AF133127 | Hevea brasiliensis |
| SEQ ID NO. 2685 | | | AAD49232.1 | AF159387 | Lolium perenne |
| AAF40306.1 | AF156667 | Vigna radiata | AAD56954.1 | AF186240 | Secale cereale |
| BAA03763.1 | D16247 | Nicotiana sylvestris | CAA56850.1 | X80887 | Chlamydomonas reinhardtii |
| AAF75791.1 | AF271892 | Pisum sativum | CAA55399.1 | X78822 | Chlamydomonas reinhardtii |
| CAA68193.1 | X99937 | Spinacia oleracea | AAC19392.1 | AF069314 | Mesembryanthemum crystallinum |
| AAD20980.1 | AF079782 | Zea mays | CAA53900.1 | X76269 | Pisum sativum |
| BAA95705.1 | AB042644 | Oryza sativa | AAC04671.1 | AF018174 | Brassica napus |
| BAA95704.1 | AB042643 | Oryza sativa | AAC49358.1 | U35831 | Pisum sativum |
| AAG48833.1 | AC084218 | Oryza sativa | AAB52409.1 | U76831 | Brassica napus |
| SEQ ID NO. 2687 | | | AAD45358.1 | AF160870 | Brassica napus |
| AAC61839.1 | AF025430 | Papaver somniferum | CAA33082.1 | X14959 | Spinacia oleracea |
| AAB20352.1 | S65550 | Eschscholzia californica | CAA35827.1 | X51463 | Spinacia oleracea |
| | | | CAA35826.1 | X51462 | Spinacia oleracea |
| | | | CAA45098.1 | X63537 | Pisum sativum |
| | | | CAA06736.1 | AJ005841 | Oryza sativa |

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| AAC49357.1 | U35830 | Pisum sativum | AAA63452.1 | M55191 | Solanum tuberosum |
| CAA56851.1 | X80888 | Chlamydomonas reinhardtii | BAA04611.1 | D17765 | Oryza sativa |
| CAA55398.1 | X78821 | Chlamydomonas reinhardtii | SEQ ID NO. 2692 | | |
| CAA44209.1 | X62335 | Chlamydomonas reinhardtii | CAA54612.1 | X77462 | Manihot esculenta |
| CAA06735.1 | AJ005840 | Triticum aestivum | CAA54609.1 | X77459 | Manihot esculenta |
| AAB03681.1 | U43609 | Chlamydomonas reinhardtii | CAA54611.1 | X77461 | Manihot esculenta |
| | | | CAA54613.1 | X77463 | Manihot esculenta |
| | | | CAB56231.1 | Y18871 | Dorotheanthus bellidifolium |
| | | | AAB36653.1 | U32644 | Nicotiana tabacum |
| | | | AAK28303.1 | AF346431 | Nicotiana tabacum |
| | | | AAF61647.1 | AF190634 | Nicotiana tabacum |
| | | | AAB36652.1 | U32643 | Nicotiana tabacum |
| | | | AAK28304.1 | AF346432 | Nicotiana tabacum |
| | | | AAF17077.1 | AF199453 | Sorghum bicolor |
| | | | BAA89009.1 | AB027455 | Petunia x hybrida |
| | | | CAA59450.1 | X85138 | Lycopersicon esculentum |
| | | | BAA83484.1 | AB031274 | Scutellaria baicalensis |
| | | | AAF98390.1 | AF287143 | Brassica napus |
| | | | BAA36423.1 | AB013598 | Verbena x hybrida |
| | | | AAD04166.1 | AF101972 | Phaseolus lunatus |
| | | | BAB41021.1 | AB047094 | Vitis vinifera |
| | | | BAB41023.1 | AB047096 | Vitis vinifera |
| | | | BAB41025.1 | AB047098 | Vitis vinifera |
| | | | BAB41019.1 | AB047092 | Vitis vinifera |
| | | | AAD21086.1 | AF127218 | Forsythia x intermedia |
| | | | BAB41017.1 | AB047090 | Vitis labrusca x Vitis vinifera |
| | | | BAB41026.1 | AB047099 | Vitis vinifera |
| | | | BAB41024.1 | AB047097 | Vitis vinifera |
| | | | BAB41022.1 | AB047095 | Vitis vinifera |
| | | | AAB81682.1 | AF000371 | Vitis vinifera |
| | | | BAB41020.1 | AB047093 | Vitis vinifera |
| | | | AAB81683.1 | AF000372 | Vitis vinifera |
| | | | BAB41018.1 | AB047091 | Vitis labrusca x Vitis vinifera |
| | | | BAA93039.1 | AB033758 | Citrus unshiu |
| | | | SEQ ID NO. 2693 | | |
| | | | CAA09881.1 | AJ011939 | Trifolium repens |
| | | | CAA62228.1 | X90695 | Medicago sativa |
| | | | AAB41812.1 | I36158 | Medicago sativa |
| | | | CAA71495.1 | Y10469 | Spinacia oleracea |
| | | | SEQ ID NO. 2689 | | |
| | | | CAA09881.1 | AJ011939 | Trifolium repens |
| | | | CAA62228.1 | X90695 | Medicago sativa |
| | | | AAB41812.1 | I36158 | Medicago sativa |
| | | | CAA71495.1 | Y10469 | Spinacia oleracea |
| | | | SEQ ID NO. 2691 | | |
| | | | AAC67587.1 | AF095521 | Trifolium repens |
| | | | CAA83682.1 | Z32849 | Medicago sativa |
| | | | AAA63451.1 | M55190 | Medicago sativa |
| | | | CAA83683.1 | Z32850 | Spinacia oleracea |
| | | | AAC67586.1 | AF095520 | Spinacia oleracea |
| | | | SEQ ID NO. 2689 | | |
| | | | CAA09881.1 | AJ011939 | Trifolium repens |
| | | | CAA62228.1 | X90695 | Medicago sativa |
| | | | AAB41812.1 | I36158 | Medicago sativa |
| | | | CAA71495.1 | Y10469 | Spinacia oleracea |
| | | | SEQ ID NO. 2689 | | |
| | | | CAA09881.1 | AJ011939 | Trifolium repens |
| | | | CAA62228.1 | X90695 | Medicago sativa |
| | | | AAB41812.1 | I36158 | Medicago sativa |
| | | | CAA71495.1 | Y10469 | Spinacia oleracea |

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| AAAD11482.1 | U51192 | Glycine max | CAA46916.1 | X66125 | Oryza sativa |
| AAAD11481.1 | U51191 | Glycine max | AAA32676.1 | M37637 | Arachis hypogaea |
| AAAD11483.1 | U51193 | Glycine max | SEQ ID NO. 2694 | | |
| BAA77387.1 | AB024437 | Scutellaria baicalensis | CAA88254.1 | Z48221 | Phaseolus vulgaris |
| AAAD11484.1 | U51194 | Glycine max | CAA40686.1 | X57438 | Brassica napus |
| CAA62226.1 | X90693 | Medicago sativa | CAA05491.1 | AJ002485 | Medicago sativa |
| AAC98519.1 | AF007211 | Glycine max | CAA05493.1 | AJ002487 | Medicago sativa |
| CAC211393.1 | AJ001276 | Zea mays | CAA56766.1 | X80788 | Medicago sativa subsp. x v. |
| AAA65637.1 | L13654 | Lycopersicon esculentum | CAB07803.1 | Z93768 | Nicotiana tabacum |
| BAA07664.1 | D42065 | Nicotiana tabacum | CAA05492.1 | AJ002486 | Medicago sativa |
| AAA98491.1 | L36981 | Petroselinum crispum | BAA92244.1 | AB038648 | Vicia faba |
| AAAD37427.1 | AF149277 | Phaseolus vulgaris | AAA33545.1 | M60215 | Zea mays |
| CAB67121.1 | Y19023 | Lycopersicon esculentum | AAA74625.1 | U31773 | Oryza sativa |
| AAA65636.1 | L13653 | Lycopersicon esculentum | CAA07470.1 | AJ007332 | Catharanthus roseus |
| BAA03644.1 | D14997 | Lycopersicon esculentum | AAD38856.1 | AF156101 | Chlamydomonas reinhardtii |
| CAA50597.1 | X71593 | Oryza sativa | CAB07804.1 | Z93769 | Nicotiana tabacum |
| ABA41811.1 | L36157 | Medicago sativa | CAA45119.1 | X63558 | Brassica oleracea |
| AAF63024.1 | AF244921 | Spinacia oleracea | CAA82263.1 | Z28627 | Acetabularia cliftonii |
| BAA07663.1 | D42064 | Nicotiana tabacum | CAA05494.1 | AJ002488 | Medicago sativa |
| BAA01950.1 | D11337 | Vigna angularis | CAA82264.1 | Z28632 | Acetabularia cliftonii |
| AAF65464.2 | AF247700 | Oryza sativa | CAB07805.1 | Z93770 | Nicotiana tabacum |
| BAA08499.1 | D49551 | Oryza sativa | AAD48068.1 | AF173881 | Oryza sativa subsp. indica |
| CAA71496.1 | Y10470 | Spinacia oleracea | CAB46506.1 | AJ007496 | Nicotiana tabacum |
| CAB94692.1 | AJ242742 | Ipomoea batatas | CAA81395.1 | Z26654 | Acetabularia cliftonii |
| AAG02215.1 | AF291667 | Pinus sylvestris | AAD22116.1 | AF134552 | Oryza sativa subsp. indica |
| AAAD37376.1 | AF145350 | Glycine max | BAA92698.1 | AB039917 | Vicia faba |
| CAA62227.1 | X90694 | Medicago sativa | BAA92697.1 | AB039916 | Vicia faba |
| CAA71488.1 | Y10462 | Spinacia oleracea | CAB07807.1 | Z93772 | Nicotiana tabacum |
| CAA71492.1 | Y10466 | Spinacia oleracea | BAA92699.1 | AB039918 | Vicia faba |
| BAA01877.1 | D11102 | Populus kitakamiensis | CAA49849.1 | X70399 | Medicago sativa |
| CAA76374.2 | Y16776 | Spinacia oleracea | AAD41126.1 | AF159061 | Oryza sativa subsp. indica |
| AAAB06183.1 | M37636 | Arachis hypogaea | CAA40687.1 | X57439 | Brassica napus |
| AAD433561.1 | AF155124 | Gossypium hirsutum | CAC11129.1 | AJ298829 | Fagus sylvatica |
| AAC49819.1 | AF014468 | Oryza sativa | CAA81126.1 | Z26041 | Helianthus annuus |
| CAA05897.1 | AJ003141 | Hordeum vulgare | AAD09953.1 | AF107464 | Hevea brasiliensis |
| AAAB67737.1 | L77080 | Stylosanthes humilis | AAF86353.1 | AF283668 | Oryza sativa subsp. indica |
| BAA03911.1 | D16442 | Oryza sativa | AAC72838.1 | AF097182 | Oryza sativa |
| CAA62225.1 | X90692 | Medicago sativa | CAA07471.1 | AJ007333 | Catharanthus roseus |
| CAA74203.1 | Y13905 | Zea mays | AAA91806.1 | U49113 | Oryza sativa |
| CAA71490.1 | Y10464 | Spinacia oleracea | CAB07806.1 | Z93771 | Nicotiana tabacum |
| AAA34108.1 | J02979 | Nicotiana tabacum | | | |

| | | | | | |
|-----------------|----------|------------------------|-----------------|----------|---------------------------------|
| CAA87385.1 | Z47076 | Malus x domestica | AA027591.1 | AF121354 | Petroselinum crispum |
| CAC11128.1 | AJ298828 | Fagus sylvatica | BAA87069.1 | AB035271 | Matricaria chamomilla |
| CAA87387.1 | Z47078 | Malus x domestica | SEQ ID NO. 2698 | | |
| CAA87386.1 | Z47077 | Malus x domestica | CAA06223.1 | AJ004923 | Lycopersicon esculentum |
| BAA92333.1 | AB038786 | Vicia faba | SEQ ID NO. 2699 | | |
| BAA92334.1 | AB038787 | Vicia faba | CAA59472.1 | X85206 | Catharanthus roseus |
| BAA92337.1 | AB038790 | Vicia faba | BAB16431.1 | AB041519 | Nicotiana tabacum |
| BAA92338.1 | AB038791 | Vicia faba | AAF78903.1 | AF248055 | Glycine max |
| BAA92336.1 | AB038789 | Vicia faba | AAC60566.1 | S68113 | Brassica napus |
| SEQ ID NO. 2695 | | | AAC49369.1 | U34333 | Phaseolus vulgaris |
| AAA33945.1 | J03919 | Glycine max | AAD01800.1 | AF026382 | Fragaria x ananassa |
| CAA48297.1 | X68215 | Pisum sativum | BAA13150.1 | D86629 | Nicotiana tabacum |
| AAA33944.1 | J03920 | Glycine max | BAB16428.1 | AB041516 | Nicotiana tabacum |
| CAA48298.1 | X68216 | Pisum sativum | BAA95941.1 | AB035125 | Nicotiana tabacum |
| CAA48299.1 | X68217 | Pisum sativum | BAA13155.1 | D86721 | Nicotiana tabacum |
| CAA48300.1 | X68218 | Pisum sativum | AAB18205.1 | U73214 | Nicotiana tabacum |
| AAD50278.1 | AF169830 | Glycine max | CAA57810.1 | X82413 | Triticum aestivum |
| SEQ ID NO. 2696 | | | AAA33132.1 | L20755 | Asparagus officinalis |
| AAC37515.1 | I44134 | Cucumis sativus | CAA42959.1 | X60432 | Cuscuta reflexa |
| AAD16139.1 | AF096299 | Nicotiana tabacum | CAA43666.1 | X61395 | Zea mays |
| BAA77383.1 | AB020590 | Nicotiana tabacum | CAA40361.1 | X57076 | Lycopersicon esculentum |
| BAA86031.1 | AB026890 | Nicotiana tabacum | SEQ ID NO. 2701 | | |
| AAC31956.1 | AF080595 | Pimpinella brachycarpa | CAA52149.1 | X73961 | Cucumis sativus |
| AAD55974.1 | AF121353 | Petroselinum crispum | AAC03416.1 | U92815 | Citrullus lanatus |
| AAC49527.1 | U48831 | Petroselinum crispum | CAA47345.1 | X66874 | Phaseolus vulgaris |
| BAA82107.1 | AB022693 | Nicotiana tabacum | AAC60559.2 | S59747 | Mitochondrion Solanum tuberosum |
| CAA88326.1 | Z48429 | Avena fatua | AAA33637.1 | L03299 | Pisum sativum |
| AAD16138.1 | AF096298 | Nicotiana tabacum | AAB96660.1 | AF039084 | Spinacia oleracea |
| AAE23898.1 | AF193802 | Oryza sativa | AAB91473.1 | AF035458 | Spinacia oleracea |
| AAC49529.1 | U58540 | Petroselinum crispum | AAB91472.1 | AF035457 | Spinacia oleracea |
| AAG35658.1 | AF204925 | Petroselinum crispum | CAA65356.1 | X96502 | Chlamydomonas reinhardtii |
| BAA77358.1 | AB020023 | Nicotiana tabacum | AAB96659.1 | AF039083 | Spinacia oleracea |
| BAB16432.1 | AB041520 | Nicotiana tabacum | AAB91471.1 | AF035456 | Spinacia oleracea |
| CAA88331.1 | Z48431 | Avena fatua | AAA18570.1 | M99565 | Spinacia oleracea |
| CAB66338.1 | AJ279697 | Betula pendula | CAB72128.1 | AJ249329 | Cucumis sativus |
| AAC49528.1 | U56834 | Petroselinum crispum | AAA34139.1 | L08830 | Lycopersicon esculentum |
| AAG35659.1 | AF204926 | Petroselinum crispum | CAA67867.1 | X99515 | Pisum sativum |
| AAF61864.1 | AF193771 | Nicotiana tabacum | CAA30018.1 | X06932 | Petunia x hybrida |
| AAF61863.1 | AF193770 | Nicotiana tabacum | | | |

| | | |
|------------|----------|-------------------------|
| AAB99745.1 | AF005993 | Triticum aestivum |
| AAB88134.1 | AF034618 | Spinacia oleracea |
| CAA44620.1 | X62799 | Glycine max |
| CAA37971.1 | X54030 | Lycopersicon esculentum |
| AAB88009.1 | AF035414 | Brassica napus |
| CAB72130.1 | AJ249331 | Cucumis sativus |
| AAF34134.1 | AF161180 | Malus x domestica |
| CAB72129.1 | AJ249330 | Cucumis sativus |
| CAA47948.1 | X67711 | Oryza sativa |
| AAB88133.1 | AF034617 | Spinacia oleracea |
| AAB88132.1 | AF034616 | Spinacia oleracea |
| AAB97316.1 | AF033852 | Spinacia oleracea |
| CAA43711.1 | X61491 | Spinacia oleracea |

What is claimed is:

1. A method of identifying a stress condition to which a plant cell has been exposed, the method comprising:

5 a) contacting nucleic acid molecules representative of expressed polynucleotides in the plant cell with an array of probes representative of the plant cell genome; and

b) detecting a profile of expressed polynucleotides in the plant cell characteristic of a stress response, thereby identifying the stress condition to which the plant cell was exposed.

10

2. The method of claim 1, wherein the stress condition is an abiotic stress condition.

15 3. The method of claim 2, wherein the abiotic stress is a cold stress condition, an osmotic stress condition, a saline stress condition, or a combination thereof.

4. The method of claim 1, wherein the profile is characteristic of exposure to a single stress condition.

20 5. The method of claim 1, wherein the profile is characteristic of a cold stress response, and wherein the expressed polynucleotides comprise one or a plurality of SEQ ID NOS:1-155, 157-229, 230-232, 234-557, 559-572, 574-605, 607-634, 636-634, 636-786, 788-812, and 814-1261.

25 6. The method of claim 1, wherein the profile is characteristic of a cold stress response, and wherein the expressed polynucleotides comprise one or a plurality of SEQ ID NOS:1-1261.

30 7. The method of claim 1, wherein the profile is characteristic of an osmotic stress response, and wherein the expressed polynucleotides comprise one or a plurality of SEQ ID NOS:2428-2585.

8. The method of claim 1, wherein the profile is characteristic of a saline stress response, and wherein the expressed polynucleotides comprise one or a plurality of SEQ ID NOS:2227-2427.

5 9. The method of claim 2, wherein the profile is characteristic of exposure to at least two abiotic stress conditions.

10 10. The method of claim 9, wherein the abiotic stress conditions are cold and osmotic stress conditions, and wherein the expressed polynucleotides comprise one or a plurality of SEQ ID NOS:1699-1725, 1727-1865, 1867-1917, 1919-1927, and 1929-1969.

15 11. The method of claim 9, wherein the abiotic stress conditions are cold and osmotic stress conditions, and wherein the expressed polynucleotides comprise one or a plurality of SEQ ID NOS:1699-1969.

20 12. The method of claim 9, wherein the abiotic stress conditions are cold and saline stress conditions, and wherein the expressed polynucleotides comprise one or a plurality of SEQ ID NOS:1970-2226.

 13. The method of claim 9, wherein the abiotic stress conditions are osmotic and saline stress conditions, and wherein the expressed polynucleotides comprise one or a plurality of SEQ ID NOS:2586-2703.

25 14. The method of claim 9, wherein the abiotic stress conditions are cold, osmotic and saline stress conditions, and wherein the expressed polynucleotides comprise one or a plurality of SEQ ID NOS:1262, 1264-1386, 1387-1390, 1392-1404, 1406-1444, 1446-1483, 1485-1588, 1590-1608, 1610-1633, and 1634-1698.

30 15. The method of claim 9, wherein the abiotic stress conditions are cold, osmotic and saline stress conditions, and wherein the expressed polynucleotides comprise one or a plurality of SEQ ID NOS:1262-1698.

16. The method of claim 1, wherein the nucleic acid molecules representative of expressed polynucleotides in the plant cell are RNA molecules or cDNA molecules.

5

17. The method of claim 1, wherein the array of probes representative of the plant cell genome is immobilized on a microchip.

18. A method for determining whether a test plant has been exposed to an abiotic stress, the method comprising contacting nucleic acid molecules representative of expressed polynucleotides in cells of the test plant with at least one nucleic acid probe under conditions suitable for selective hybridization to a complementary nucleotide sequence,

wherein the probe comprises at least 15 nucleotides of a plant stress-regulated gene, provided said gene does not comprise a nucleotide sequence of a polynucleotide as set forth in any of SEQ ID NOS:156, 229, 233, 558, 573, 606, 635, 787, 813, 1263, 1386, 1391, 1405, 1445, 1484, 1589, 1609, 1634, 1726, 1866, 1918 or 1928, or a nucleotide sequence complementary thereto,

whereby
detecting selective hybridization of at least one nucleic acid probe, or
detecting a change in a level of selective hybridization as compared to
a level of selective hybridization obtained using nucleic acid molecules
representative of expressed polynucleotides in cells of a plant known not have
been exposed to an abiotic stress,

indicates that the test plant has been exposed to an abiotic stress, and
whereby an absence of selective hybridization of at least one nucleic acid
probe indicates that the test plant has not been exposed to an abiotic stress.

19. The method of claim 18, wherein the abiotic stress is cold stress, and wherein the probe comprises at least 15 nucleotides of a nucleotide sequence as set forth in any of SEQ ID NOS:1-155, 157-228, 230-232, 234-557, 559-572, 574-605, 607-634, 636-786, 788-812, 814-1261 or a nucleotide sequence complementary thereto.

20. The method of claim 18, wherein the abiotic stress is saline stress, and wherein the probe comprises at least 15 nucleotides of a nucleotide sequence as set forth in any of SEQ ID NOS:2226-2427 or a nucleotide sequence complementary thereto.

21. The method of claim 18, wherein the abiotic stress is osmotic stress, and wherein the probe comprises at least 15 nucleotides of a nucleotide sequence as set forth in two or more of SEQ ID NOS:2428-2585 or a nucleotide sequence complementary thereto.

22. A method for determining whether a test plant has been exposed to a cold stress, the method comprising contacting nucleic acid molecules representative of expressed polynucleotides in cells of the test plant with at least one nucleic acid probe under conditions suitable for selective hybridization to a complementary nucleotide sequence,

wherein the probe comprises at least 15 nucleotides of a nucleotide sequence as set forth in any of SEQ ID NOS:1-155, 157-228, 230-232, 234-557, 559-572, 574-605, 607-634, 636-786, 788-812, 814-1261, or a nucleotide sequence complementary thereto,

whereby

detecting selective hybridization of at least one nucleic acid probe, or detecting a change in a level of selective hybridization as compared to a level of selective hybridization obtained using nucleic acid molecules representative of expressed polynucleotides in cells of a plant known not have been exposed to a cold stress,

indicates that the test plant has been exposed to a cold stress, and

whereby an absence of selective hybridization of at least one nucleic acid probe indicates that the test plant has not been exposed to a cold stress.

23. A method for determining whether a test plant has been exposed to a saline stress, the method comprising contacting nucleic acid molecules representative of expressed polynucleotides in cells of the test plant with at least one nucleic acid probe under conditions suitable for selective hybridization to a complementary nucleotide sequence,

wherein the probe comprises at least 15 nucleotides of a nucleotide sequence as set forth in any of SEQ ID NOS:2226-2427, or a nucleotide sequence complementary thereto,

whereby

detecting selective hybridization of at least one nucleic acid probe, or detecting a change in a level of selective hybridization as compared to a level of selective hybridization obtained using nucleic acid molecules representative of expressed polynucleotides in cells of a plant known not have been exposed to a saline stress,

indicates that the test plant has been exposed to a saline stress, and whereby an absence of selective hybridization of at least one nucleic acid probe indicates that the test plant has not been exposed to a saline stress.

24. A method for determining whether a test plant has been exposed to an osmotic stress, the method comprising contacting nucleic acid molecules representative of expressed polynucleotides in cells of the test plant with at least one nucleic acid probe under conditions suitable for selective hybridization to a complementary nucleotide sequence,

wherein the probe comprises at least 15 nucleotides of a nucleotide sequence as set forth in two or more of SEQ ID NOS:2428-2585, or a nucleotide sequence complementary thereto,

whereby

detecting selective hybridization of at least one nucleic acid probe, or
detecting a change in a level of selective hybridization as compared to
a level of selective hybridization obtained using nucleic acid molecules
representative of expressed polynucleotides in cells of a plant known not have
5 been exposed to an osmotic stress,

indicates that the test plant has been exposed to an osmotic stress, and
whereby an absence of selective hybridization of at least one nucleic acid
probe indicates that the test plant has not been exposed to an osmotic stress.

10

25. A method for determining whether a test plant has been exposed to a
combination of abiotic stress conditions, the method comprising contacting nucleic
acid molecules representative of expressed polynucleotides in cells of the test plant
with at least one nucleic acid probe under conditions suitable for selective
15 hybridization to a complementary nucleotide sequence,

whereby

detecting selective hybridization of at least one nucleic acid probe, or
detecting a change in a level of selective hybridization as compared to
a level of selective hybridization obtained using nucleic acid molecules
representative of expressed polynucleotides in cells of a plant known not have
20 been exposed to a combination of stress conditions,

indicates that the test plant has been exposed to a combination of
abiotic stress conditions, and

whereby an absence of selective hybridization of at least one nucleic acid
25 probe indicates that the test plant has not been exposed to a combination of abiotic
stress conditions.

26. The method of claim 25, wherein the combination of abiotic stress
conditions is a combination of a cold stress and an osmotic stress, and wherein the
30 probe comprises at least 15 nucleotides of a nucleotide sequence as set forth in any of
SEQ ID NOS:1699-1969, or a nucleotide sequence complementary thereto.

27. The method of claim 25, wherein the combination of abiotic stress conditions is a combination of a cold stress and a saline stress, and wherein the probe comprises at least 15 nucleotides of a nucleotide sequence as set forth in any of SEQ ID NOS:1970-2226, or a nucleotide sequence complementary thereto.

5

28. The method of claim 25, wherein the combination of abiotic stress conditions is a combination of an osmotic stress and a saline stress, and wherein the probe comprises at least 15 nucleotides of a nucleotide sequence as set forth in any of SEQ ID NOS:2586-2703, or a nucleotide sequence complementary thereto.

10

29. The method of claim 25, wherein the combination of abiotic stress conditions is a combination of a cold stress, a saline stress and an osmotic stress, and wherein the probe comprises at least 15 nucleotides of a nucleotide sequence as set forth in any of SEQ ID NOS:1262-1698, or a nucleotide sequence complementary thereto.

15

30. A method for determining whether a test plant has been exposed to a cold stress and an osmotic stress, the method comprising contacting nucleic acid molecules representative of expressed polynucleotides in cells of the test plant with at least one nucleic acid probe under conditions suitable for selective hybridization to a complementary nucleotide sequence,

20

wherein the probe comprises at least 15 nucleotides of a nucleotide sequence as set forth in any of SEQ ID NOS:1699-1969, or a nucleotide sequence complementary thereto,

25

whereby

detecting selective hybridization of at least one nucleic acid probe, or
detecting a change in a level of selective hybridization as compared to
a level of selective hybridization obtained using nucleic acid molecules
representative of expressed polynucleotides in cells of a plant known not have
been exposed to a cold stress and an osmotic stress,

30

indicates that the test plant has been exposed to a cold stress and an osmotic stress, and

whereby an absence of selective hybridization of at least one nucleic acid probe indicates that the test plant has not been exposed to a cold stress and an osmotic stress.

5 31. A method for determining whether a test plant has been exposed to a cold stress and a saline stress, the method comprising contacting nucleic acid molecules representative of expressed polynucleotides in cells of the test plant with at least one nucleic acid probe under conditions suitable for selective hybridization to a complementary nucleotide sequence,

10 wherein the probe comprises at least 15 nucleotides of a nucleotide sequence as set forth in any of SEQ ID NOS:1970-2226, or a nucleotide sequence complementary thereto,

whereby

15 detecting selective hybridization of at least one nucleic acid probe, or detecting a change in a level of selective hybridization as compared to a level of selective hybridization obtained using nucleic acid molecules representative of expressed polynucleotides in cells of a plant known not have been exposed to a cold stress and a saline stress,

20 indicates that the test plant has been exposed to a cold stress and a saline stress, and

whereby an absence of selective hybridization of at least one nucleic acid probe indicates that the test plant has not been exposed to a cold stress and a saline stress.

25 32. A method for determining whether a test plant has been exposed to an osmotic stress and a saline stress, the method comprising contacting nucleic acid molecules representative of expressed polynucleotides in the test plant with at least one nucleic acid probe under conditions suitable for selective hybridization to a complementary nucleotide sequence,

30 wherein the probe comprises at least 15 nucleotides of a nucleotide sequence as set forth in any of SEQ ID NOS:2586-2703, or a nucleotide sequence complementary thereto,

whereby

detecting selective hybridization of at least one nucleic acid probe, or
detecting a change in a level of selective hybridization as compared to
a level of selective hybridization obtained using nucleic acid molecules
5 representative of expressed polynucleotides in cells of a plant known not have
been exposed to an osmotic stress and a saline stress,

indicates that the test plant has been exposed to an osmotic stress and a
saline stress, and

whereby an absence of selective hybridization of at least one nucleic acid
10 probe indicates that the test plant has not been exposed to an osmotic stress and a
saline stress.

33. A method for determining whether a test plant has been exposed to a cold
stress, a saline stress and an osmotic stress, the method comprising contacting nucleic
15 acid molecules representative of expressed polynucleotides in cells of the test plant
with a plurality of nucleic acid probes under conditions suitable for selective
hybridization to a complementary nucleotide sequence,

wherein the probe comprises at least 15 nucleotides of a nucleotide sequence
as set forth in any of SEQ ID NOS:1262-1698, or a nucleotide sequence
20 complementary thereto,

whereby

detecting selective hybridization of at least one nucleic acid probe, or
detecting a change in a level of selective hybridization as compared to
a level of selective hybridization obtained using nucleic acid molecules
25 representative of expressed polynucleotides in cells of a plant known not have
been exposed to a cold stress, a saline stress, and an osmotic stress,

indicates that the test plant has been exposed to a cold stress, a saline
stress and an osmotic stress, and

whereby an absence of selective hybridization of at least one nucleic acid
30 probe indicates that the test plant has not been exposed to a cold stress, a saline stress
and an osmotic stress.

34. A method for determining whether a test plant has been exposed to a cold stress, the method comprising detecting a level of expression of at least one polynucleotide comprising a nucleotide sequence as set forth in SEQ ID NOS:1-155, 157-229, 230-232, 234-557, 559-572, 574-605, 607-634, 636-634, 636-786, 788-812, 5 and 814-1261 in cells of the test plant,

wherein

detecting a level of expression that is at least about two-fold different from a level of expression of the at least one polynucleotide in cells of a plant not exposed to a cold stress, or

10 detecting a level of expression that is less than about two-fold different from a level of expression of the at least one polynucleotide in cells of a plant known to be exposed to a cold stress,

indicates the test plant has been exposed to a cold stress, or

wherein

15 detecting a level of expression that is less than at least about two-fold different from a level of expression of the at least one polynucleotide in cells of a plant not exposed to a cold stress, or

20 detecting a level of expression that is at least two-fold different from a level of expression of the at least one polynucleotide in cells of a plant known to be exposed to a cold stress,

indicates the test plant has not been exposed to a cold stress.

35. A method for determining whether a test plant has been exposed to a saline stress, the method comprising detecting a level of expression of at least one 25 polynucleotide comprising a nucleotide sequence as set forth in SEQ ID NOS:2226-2427 in cells of the test plant,

wherein

detecting a level of expression that is at least about two-fold different from a level of expression of the at least one polynucleotide in cells of a plant not exposed to a saline stress, or

5 detecting a level of expression that is less than about two-fold different from a level of expression of the at least one polynucleotide in cells of a plant known to be exposed to a saline stress,

indicates the test plant has been exposed to a saline stress, or

wherein

10 detecting a level of expression that is less than about two-fold different from a level of expression of the at least one polynucleotide in cells of a plant not exposed to a saline stress, or

 detecting a level of expression that is at least about two-fold different from a level of expression of the at least one polynucleotide in cells of a plant known to be exposed to a saline stress,

15 indicates the test plant has not been exposed to a saline stress.

36. A method for determining whether a test plant has been exposed to an osmotic stress, the method comprising detecting a level of expression of at least one polynucleotide comprising a nucleotide sequence as set forth in SEQ ID NOS:2428-2585 in cells of the test plant,

wherein

 detecting a level of expression that is at least about two-fold different from a level of expression of the at least one polynucleotide in cells of a plant not exposed to an osmotic stress, or

25 detecting a level of expression that is less than about two-fold different from a level of expression of the at least one polynucleotide in cells of a plant known to be exposed to an osmotic stress,

indicates the test plant has been exposed to a osmotic stress, or

30

wherein

detecting a level of expression that is less than about two-fold different from level of expression of the at least one polynucleotide in cells of a plant not exposed to an osmotic stress, or

- 5 detecting a level of expression that is at least about two-fold different from a level of expression of the at least one polynucleotide in cells of a plant known to be exposed to an osmotic stress,
 indicates the test plant has not been exposed to a osmotic stress.

- 10 37. A method for determining whether a test plant has been exposed to a cold stress and an osmotic stress, the method comprising detecting a level of expression of at least one polynucleotide comprising a nucleotide sequence as set forth in SEQ ID NOS:1699-1969 in cells of the test plant,

 wherein

- 15 detecting a level of expression that is at least about two-fold different from a level of expression of the at least one polynucleotide in cells of a plant not exposed to a cold stress and an osmotic stress, or

- detecting a level of expression that is less than about two-fold different from a level of expression of the at least one polynucleotide in cells of a plant
20 known to be exposed to a cold stress and an osmotic stress,

 indicates the test plant has been exposed to a cold stress and an osmotic stress, or

 wherein

- detecting a level of expression that is less than about two-fold different from as a level of expression of the at least one polynucleotide in cells of a
25 plant not exposed to a cold stress and an osmotic stress, or

- detecting a level of expression that is at least about two-fold different from a level of expression of the at least one polynucleotide in cells of a plant known to be exposed to a cold stress and an osmotic stress,

- 30 indicates the test plant has not been exposed to a cold stress and an osmotic stress.

38. A method for determining whether a test plant has been exposed to a cold stress and a saline stress, the method comprising detecting a level of expression of at least one polynucleotide comprising a nucleotide sequence as set forth in SEQ ID NOS:1970-2226 in cells of the test plant,

5 wherein

 detecting a level of expression that is at least about two-fold different from a level of expression of the at least one polynucleotide in cells of a plant not exposed to a cold stress and a saline stress, or

 detecting a level of expression that is less than about two-fold different from as a level of expression of the at least one polynucleotide in cells of a plant known to be exposed to a cold stress and a saline stress,

10 indicates the test plant has been exposed to a cold stress and a saline stress, or

 wherein

15 detecting a level of expression that is less than about two-fold different from as a level of expression of the at least one polynucleotide in cells of a plant not exposed to a cold stress and a saline stress, or

 detecting a level of expression that is at least about two-fold different from a level of expression of the at least one polynucleotide in cells of a plant known to be exposed to a cold stress and a saline stress,

20 indicates the test plant has not been exposed to a cold stress and a saline stress.

39. A method for determining whether a test plant has been exposed to a saline stress and an osmotic stress, the method comprising detecting a level of expression of at least one polynucleotide comprising a nucleotide sequence as set forth in SEQ ID NOS:2536-2703 in cells of the test plant,

 wherein

30 detecting a level of expression that is at least about two-fold different from a level of expression of the at least one polynucleotide in cells of a plant not exposed to a saline stress and an osmotic stress, or

detecting a level of expression that is less than about two-fold different from a level of expression of the at least one polynucleotide in cells of a plant known to be exposed to a saline stress and an osmotic stress,

indicates the test plant has been exposed to a saline stress and an osmotic stress, or
wherein

detecting a level of expression that is less than about two-fold different from a level of expression of the at least one polynucleotide in cells of a plant not exposed to a saline stress and an osmotic stress, or

detecting a level of expression that is at least about two-fold different from a level of expression of the at least one polynucleotide in cells of a plant known to be exposed to saline stress and an osmotic stress,

indicates the test plant has not been exposed to a saline stress and an osmotic stress.

40. A method for determining whether a test plant has been exposed to a cold stress, the method comprising detecting a level of expression of at least one polynucleotide comprising a nucleotide sequence as set forth SEQ ID NOS:1-155, 157-229, 230-232, 234-557, 559-572, 574-605, 607-634, 636-634, 636-786, 788-812, and 814-1261 in cells of the test plant,

wherein

detecting a level of expression that is at least about two-fold different from a level of expression of the at least one polynucleotide in cells of a plant not exposed to a cold stress, or

detecting a level of expression that is less than about two-fold different from a level of expression of the at least one polynucleotide in cells of a plant known to be exposed to a cold stress,

indicates the test plant has been exposed to a cold stress, or
wherein

detecting a level of expression that is less than about two-fold different from a level of expression of the at least one polynucleotide in cells of a plant not exposed to a cold stress, or

detecting a level of expression that is at least about two-fold different from a level of expression of the at least one polynucleotide in cells of a plant known to be exposed to a cold stress,

indicates the test plant has not been exposed to a cold stress.

5

41. A method for determining whether a test plant has been exposed to a cold stress, a saline stress and an osmotic stress, the method comprising detecting a level of expression of at least one polynucleotide comprising a nucleotide sequence as set forth in SEQ ID NOS:1262-1698 in cells of the test plant,

10

wherein

detecting a level of expression that is at least about two-fold different from a level of expression of the at least one polynucleotide in cells of a plant not exposed to a cold stress, a saline stress and an osmotic stress, or

15

detecting a level of expression that is less than about two-fold different from a level of expression of the at least one polynucleotide in cells of a plant known to be exposed to a cold stress, a saline stress and an osmotic stress,

indicates the test plant has been exposed to a cold stress, a saline stress and an osmotic stress, or

wherein

20

detecting a level of expression that is less than about two-fold different from a level of expression of the at least one polynucleotide in cells of a plant not exposed to a cold stress, a saline stress and an osmotic stress, or

25

detecting a level of expression that is at least about two-fold different from a level of expression of the at least one polynucleotide in cells of a plant known to be exposed to a cold stress, a saline stress and an osmotic stress,

indicates the test plant has not been exposed to a cold stress, a saline stress and an osmotic stress.

42. A method of producing a transgenic plant comprising plant cells that exhibit altered responsiveness to at least one stress condition, the method comprising introducing a polynucleotide portion of a plant stress-regulated gene into a plant cell genome, wherein the polynucleotide portion of the stress-regulated gene does not
5 comprise a nucleotide sequence as set forth in any of SEQ ID NOS:156, 229, 233, 558, 573, 606, 635, 787, 813, 1263, 1386, 1391, 1405, 1445, 1484, 1589, 1609, 1634, 1726, 1866, 1918 or 1928, whereby the polynucleotide portion of the plant stress-regulated gene modulates a response of the plant cells to at least one stress condition, thereby producing a transgenic plant comprising plant cells that exhibit altered
10 responsiveness to the stress condition.

43. The method of claim 42, wherein the stress condition is cold stress, and wherein the polynucleotide portion of a plant stress-regulated gene comprises a nucleotide sequence as set forth in any of SEQ ID NOS:1-155, 157-228, 230-232,
15 234-557, 559-572, 574-605, 607-634, 636-786, 788-812, 814-1261, 2704-2855, 2857-2928, 2930-2932, 2934-3256, 3258-3271, 3273-3304, 3306-3323, 3325-3333, 3335-3485, 3487-3511, and 3313-3955.

44. The method of claim 42, wherein the stress condition is saline stress, and
20 wherein the polynucleotide portion of a plant stress-regulated gene comprises a nucleotide sequence as set forth in any of SEQ ID NOS:2226-2427 and 4910-5107.

45. The method of claim 42, wherein the stress condition is osmotic stress, and wherein the polynucleotide portion of a plant stress-regulated gene comprises a
25 nucleotide sequence as set forth in any of SEQ ID NOS:2428-2585 and 5108-5263.

46. A method of producing a transgenic plant comprising plant cells that exhibit altered responsiveness to a combination of at least two stress conditions, the method comprising introducing a polynucleotide portion of a plant stress-regulated gene into a plant cell genome, whereby the polynucleotide portion of the plant stress-regulated gene modulates a response of the plant cells to a combination of at least two stress conditions, thereby producing a transgenic plant comprising plant cells that exhibit altered responsiveness to the stress conditions.

47. The method of claim 46, wherein the combination of at least two stress conditions is a combination of cold stress and osmotic stress, and wherein the polynucleotide portion of the plant stress-regulate gene comprises a nucleotide sequences as set forth in any of SEQ ID NOS:1669-1969 and 4389-4654.

48. The method of claim 46, wherein the combination of at least two stress conditions is a combination of cold stress and osmotic stress, and wherein the polynucleotide portion of the plant stress-regulate gene comprises a nucleotide sequences as set forth in any of SEQ ID NOS:1699-1725, 1727-1865, 1867-1917, 1919-1927, 1929-1969, 4389-4414, 4416-4552, 4554-4602, 4604-4612, and 4613-4654.

49. The method of claim 46, wherein the combination of at least two stress conditions is a combination of cold stress and saline stress, and wherein the polynucleotide portion of the plant stress-regulate gene comprises a nucleotide sequences as set forth in any of SEQ ID NOS:1970-2226 and 4655-4909.

50. The method of claim 46, wherein the combination of at least two stress conditions is a combination of osmotic stress and saline stress, and wherein the polynucleotide portion of the plant stress-regulate gene comprises a nucleotide sequences as set forth in any of SEQ ID NOS:2586-2703 and 5264-5379.

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51. The method of claim 46, wherein the combination of at least two stress conditions is a combination of cold stress, osmotic stress and saline stress, and wherein the polynucleotide portion of the plant stress-regulate gene comprises a nucleotide sequences as set forth in any of SEQ ID NOS:1262-1698 and 3956-4388.

5

52. The method of claim 46, wherein the combination of at least two stress conditions is a combination of cold stress, osmotic stress and saline stress, and wherein the polynucleotide portion of the plant stress-regulate gene comprises a nucleotide sequences as set forth in any of SEQ ID NOS:1262, 1264-1386, 1387-1390,
10 1392-1404, 1406-1444, 1446-1483, 1485-1588, 1590-1608, 1610-1633, 1634-1698, 3956, 3958-4078, 4080-4097, 4099-4136, 4138-4175, 4177-4279, 4281-4299, 4301-4324, and 4326-4388.

53. The method of any of claim 42 to 52, wherein the polynucleotide portion
15 of the plant stress-regulated gene encodes a stress-regulated polypeptide or functional peptide portion thereof.

54. The method of claim 53, wherein the stress-regulated polypeptide or functional peptide portion thereof increases the stress tolerance of the transgenic
20 plant.

55. The method of claim 53, wherein the stress-regulated polypeptide or functional peptide portion thereof decreases the stress tolerance of the transgenic
25 plant.

56. The method of claim 53, wherein the polynucleotide portion of the plant stress-regulated gene is operatively linked to a heterologous promoter.

57. The method of any of claim 42 to 52, wherein the polynucleotide portion
30 of the plant stress-regulated gene comprises a stress-regulated regulatory element.

58. The method of claim 57, wherein, upon introducing the stress-regulated regulatory element into the plant cell, the regulatory element integrates into the plant cell genome in a site-specific manner.

5 59. The method of claim 58, wherein, upon integrating into the plant cell genome, the regulatory element is operatively linked to a heterologous nucleotide sequence, which can be expressed in response to a stress condition specific for the regulatory element.

10 60. The method of claim 57, wherein the plant stress-regulated regulatory element is a mutant regulatory element, which is not responsive to the stress condition, whereby upon integrating into the plant cell genome, the mutant regulatory element disrupts an endogenous stress-regulated regulatory element of a plant stress-regulated gene, thereby altering the responsiveness of the plant stress-regulated gene
15 to the stress condition.

61. The method of any of claim 42 to 60, wherein the stress is an abiotic stress.

20 62. The method of claim 61, wherein the abiotic stress is selected from the group consisting of an abnormal level of cold, osmotic pressure, salinity, and a combination thereof.

25 63. The method of claim 57, wherein the stress-regulated regulatory element is operatively linked to a polynucleotide encoding a detectable marker.

64. A transgenic plant produced by the method of any of claims 42 to 63.

65. A plant cell from the transgenic plant of claim 64, wherein said plant cell exhibits altered responsiveness to the stress condition or stress conditions.

30

66. A seed produced by the transgenic plant of claim 64.

67. A cDNA or genomic DNA library prepared from the transgenic plant of claim 64, or from a plant cell from said transgenic plant, wherein said plant cell exhibits altered responsiveness to the stress condition.

5 68. A method for monitoring a population of plants for exposure to a stress condition or combination of stress conditions, the method comprising:

 a) introducing into the population of a plants a sentinel plant, wherein said sentinel plant is a transgenic plant of claim 64, which comprises plant cells containing a stress-regulated regulatory element is operatively linked to a
10 polynucleotide encoding a detectable marker; and

 b) examining the sentinel plant for expression of the detectable marker, which is indicative of exposure of the population of plants to a stress condition or combination of stress conditions,
 thereby monitoring the population of plants for exposure to a stress condition
15 or combination of stress conditions.

 69. The method of claim 68, wherein said stress condition or combination of stress conditions is an abiotic stress condition or combination of abiotic stress conditions.
20

 70. The method of claim 68 or 69, wherein said stress condition or combination of stress conditions is cold stress, osmotic stress, saline stress, and a combination thereof.

25 71. The method of any of claims 68 to 70, wherein the stress condition is a cold stress condition, and wherein the regulatory element comprises a nucleotide sequence as set forth in any of SEQ ID NOS:2704-3955.

72. The method of any of claims 68 to 70, wherein the stress condition is a cold stress condition, and wherein the regulatory element comprises a nucleotide sequence as set forth in any of SEQ ID NOS:2704-2855, 2857-2928, 2930-2932, 2934-3256, 3258-3271, 3273-3304, 3306-3323, 3325-3333, 3335-3485, 3487-3511, and 3313-3955.

73. The method of any of claims 68 to 70, wherein the stress condition is a saline stress condition, and wherein the regulatory element comprises a nucleotide sequence as set forth in any of SEQ ID NOS:4910-5107.

10

74. The method of any of claims 68 to 70, wherein the stress condition is an osmotic stress condition, and wherein the regulatory element comprises a nucleotide sequence as set forth in any of SEQ ID NOS:5108-5263.

75. The method of any of claims 68 to 70, wherein the combination of stress conditions is cold stress and osmotic stress, and wherein the regulatory element comprises a nucleotide sequence as set forth in any of SEQ ID NOS:4389-4654.

76. The method of any of claim 68 to 70, wherein the combination of stress conditions is a cold stress and an osmotic stress, and wherein the regulatory element comprises a nucleotide sequence as set forth in any of SEQ ID NOS:4389-4414, 4416-4552, 4554-4602, 4604-4612, and 4613-4654.

77. The method of any of claims 68 to 70, wherein the combination of stress condition is a cold stress and a saline stress, and wherein the regulatory element comprises a nucleotide sequence as set forth in any of SEQ ID NOS:4655-5909.

78. The method of any of claims 68 to 70, wherein the combination of stress conditions is an osmotic stress and a saline stress, and wherein the regulatory element comprises a nucleotide sequence as set forth in any of SEQ ID NOS:5264-5379.

79. The method of any of claims 68 to 70, wherein the combination of stress conditions is a cold stress, an osmotic stress, and a saline stress, and wherein the regulatory element comprises a nucleotide sequence as set forth in any of SEQ ID NOS:3956-4388.

5

80. The method of any of claims 68 to 70, wherein the combination of stress conditions is a cold stress, an osmotic stress, and a saline stress, and wherein the regulatory element comprises a nucleotide sequence as set forth in any of SEQ ID NOS:3956, 3958-4078, 4080-4097, 4099-4136, 4138-4175, 4177-4279, 4281-4299, 4301-4324, and 4326-4388.

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81. The method of any of claims 68 to 80, wherein the detectable marker is visibly detectable.

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82. The method of any of claims 68 to 80, wherein said detectable marker comprises a luminescent detectable marker.

83. The method of any of claims 68 to 80, wherein said detectable marker comprises a fluorescent detectable marker.

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84. The method of claim 83, wherein said fluorescent detectable marker comprises a green fluorescent protein, a yellow fluorescent protein, a cyan fluorescent protein, a red fluorescent protein, or an enhanced or modified form thereof.

25

85. A method of selecting a plant having an altered resistance to an abiotic stress condition or a combination of abiotic stress conditions, the method comprising:

a) contacting nucleic acid molecules representative of expressed polynucleotides in a plant cell of a plant to be examined for having an altered resistance to an abiotic stress with a nucleic acid probes that selectively hybridizes under stringent conditions to a plant stress-regulated gene comprising a nucleotide sequence as set forth in any of SEQ ID NO:1-5379;

30

b) detecting a level of selective hybridization of the nucleic acid probes to a nucleic acid molecule representative of an expressed polynucleotide in the plant cell, wherein the level of selective hybridization corresponds to the level of the expressed polynucleotide in the plant cell, which is indicative of resistance of the plant to an abiotic stress; and

c) selecting a plant having a level of expression of a polynucleotide indicative of altered resistance to an abiotic stress condition.

86. The method of claim 85, wherein the abiotic stress condition is cold stress, and wherein the nucleic acid probe comprises at least about 15 nucleotides of a nucleotide sequence as set forth in any of SEQ ID NOS:1-1261 and 2704-3955.

87. The method of claim 85, wherein the abiotic stress condition is cold stress, and wherein the nucleic acid probe comprises at least about 15 nucleotides of a nucleotide sequence as set forth in any of SEQ ID NOS:1-155, 157-228, 230-232, 234-557, 559-572, 574-605, 607-634, 636-786, 788-812, 814-1261, 2704-2855, 2857-2928, 2930-2932, 2934-3256, 3258-3271, 3273-3304, 3306-3323, 3325-3333, 3335-3485, 3487-3511, and 3313-3955.

88. The method of claim 85, wherein the abiotic stress condition is saline stress, and wherein the nucleic acid probe comprises at least about 15 nucleotides of a nucleotide sequence as set forth in any of SEQ ID NOS:2226-2427 and 4910-5107.

89. The method of claim 85, wherein the abiotic stress condition is osmotic stress, and wherein the nucleic acid probe comprises at least about 15 nucleotides of a nucleotide sequence as set forth in any of SEQ ID NOS:2428-2585 and 5108-5263.

90. The method of claim 85, wherein the combination of abiotic stress conditions is a combination of cold stress and osmotic stress, and wherein the nucleic acid probe comprises at least about 15 nucleotides of a nucleotide sequence as set forth in any of SEQ ID NOS:1669-1969 and 4389-4654.

91. The method of claim 85, wherein the combination of abiotic stress conditions is a combination of cold stress and osmotic stress, and wherein the nucleic acid probe comprises at least about 15 nucleotides of a nucleotide sequence as set forth in any of SEQ ID NOS:1699-1725, 1727-1865, 1867-1917, 1919-1927,
5 1929-1969, 4389-4414, 4416-4552, 4554-4602, 4604-4612, and 4613-4654.

92. The method of claim 85, wherein the combination of abiotic stress conditions is a combination of cold stress and saline stress, and wherein the nucleic acid probe comprises at least about 15 nucleotides of a nucleotide sequence as set forth in
10 any of SEQ ID NOS:1970-2226 and 4655-4909.

93. The method of claim 85, wherein the combination of abiotic stress conditions is a combination of osmotic stress and saline stress, and wherein the nucleic acid probe comprises at least about 15 nucleotides of a nucleotide sequence as set
15 forth in any of SEQ ID NOS:2586-2703 and 5264-5379.

94. The method of claim 85, wherein the combination of abiotic stress conditions is a combination of cold stress, osmotic stress and saline stress, and wherein the nucleic acid probe comprises at least about 15 nucleotides of a nucleotide
20 sequence as set forth in any of SEQ ID NOS:1262-1698 and 3956-4388.

95. The method of claim 85, wherein the combination of abiotic stress conditions is a combination of cold stress, osmotic stress and saline stress, and wherein the nucleic acid probe comprises at least about 15 nucleotides of a nucleotide
25 sequence as set forth in any of SEQ ID NOS:1262, 1264-1386, 1387-1390, 1392-1404, 1406-1444, 1446-1483, 1485-1588, 1590-1608, 1610-1633, 1634-1698, 3956, 3958-4078, 4080-4097, 4099-4136, 4138-4175, 4177-4279, 4281-4299, 4301-4324, and 4326-4388.

96. A method of modulating the responsiveness of a plant cell to a stress condition, the method comprising introducing a polynucleotide portion of a plant stress-regulated gene into the plant cell, wherein said gene comprises a nucleotide sequence of a polynucleotide as set forth in any of SEQ ID NOS:1-155, 157-228,
5 230-232, 234-557, 559-572, 574-605, 607-634, 636-786, 788-812, 814-1262, 1264-1386, 1387-1390, 1392-1404, 1406-1444, 1446-1483, 1485-1588, 1590-1608, 1610-1633, 1634-1725, 1727-1865, 1867-1917, 1919-1927, 1929-2855, 2857-2928, 2930-2932, 2934-3256, 3258-3271, 3273-3304, 3306-3323, 3325-3333, 3335-3485, 3487-3511, 3313-3956, 3958-4078, 4080-4097, 4099-4136, 4138-4175, 4177-4279,
10 4281-4299, 4301-4324, 4326-4414, 4416-4552, 4554-4602, and 4604-5379, thereby modulating the responsiveness of the plant cell to a stress condition.

97. The method of claim 96, wherein the responsiveness of the plant cell is increased upon exposure to the stress condition.
15

98. The method of claim 97, wherein increased responsiveness of the plant cell increases the stress tolerance of the plant cell to the stress condition.

99. The method of claim 96, wherein the responsiveness of the plant cell is decreased upon exposure to the stress condition.
20

100. The method of claim 99, wherein decreased responsiveness of the plant cell increases the stress tolerance of the plant cell to the stress condition.

25 101. The method of claim 96, wherein the polynucleotide portion of the plant stress-regulated gene integrates into the genome of the plant cell, thereby modulating the responsiveness of the plant cell to the stress condition.

30 102. The method of claim 96, wherein the polynucleotide portion of the plant stress-regulated gene encodes a stress-regulated polypeptide or functional peptide portion thereof.

103. The method of claim 102, wherein the stress-regulated polypeptide or functional peptide portion thereof increases the responsiveness of the plant cell to the stress condition.

5 104. The method of claim 102, wherein the polynucleotide portion of the plant stress-regulated gene is operatively linked to a heterologous promoter.

10 105. The method of claim 102, wherein the polynucleotide portion of the plant stress-regulated gene contains a mutation, whereby upon integrating into the plant cell genome, the polynucleotide disrupts an endogenous plant stress-regulated gene, thereby modulating the responsiveness of said plant cell to the stress condition.

15 106. The method of claim 105, wherein the endogenous plant stress-regulated gene encodes a maladaptive stress-regulated polypeptide, and wherein said plant cell exhibits increased tolerance to the stress condition.

107. The method of claim 96, wherein the polynucleotide portion of the plant stress-regulated gene comprises a stress-regulated gene regulatory element.

20 108. The method of claim 107, wherein, the regulatory element is operatively linked to a heterologous nucleotide sequence, which, upon expression from the regulatory element in response to a stress condition, modulates the responsiveness of the plant cell to the stress condition.

25 109. The method of claim 108, wherein the heterologous nucleotide sequence encodes a stress-inducible transcription factor.

110. The method of claim 109, wherein the transcription factor is DREB1A.

111. The method of claim 108, wherein the heterologous nucleotide sequence encodes a polynucleotide specific for a plant stress-regulated gene, said polynucleotide selected from the group consisting of an antisense molecule, a ribozyme, and a triplexing agent, which, upon expression in the plant cell, reduces or inhibits expression of a stress-regulated polypeptide encoded by the gene, thereby modulating the responsiveness of the plant cell to a stress condition.

112. The method of claim 108, wherein the heterologous nucleotide sequence encodes a recombinant polypeptide comprising a zinc finger domain and a transcription effector domain.

113. The method of claim 112, wherein the transcription effector domain is a transcription activator domain.

114. The method of claim 96, wherein the stress condition is cold stress, osmotic stress, saline stress, or a combination thereof.

115. A method of expressing a heterologous nucleotide sequence in a plant cell, the method comprising introducing into the plant cell a plant stress-regulated regulatory element operatively linked to the heterologous nucleotide sequence, wherein said regulatory element comprises a nucleotide sequence as set forth in any of SEQ ID NOS:2704-2855, 2857-2928, 2930-2932, 2934-3256, 3258-3271, 3273-3304, 3306-3323, 3325-3333, 3335-3485, 3487-3511, 3313-3956, 3958-4078, 4080-4097, 4099-4136, 4138-4175, 4177-4279, 4281-4299, 4301-4324, 4326-4414, 4416-4552, 4554-4602, and 4604-5379, whereby, upon exposure of the plant cell to stress condition, the heterologous nucleotide sequence is expressed in the plant cell.

116. The method of claim 117, wherein the heterologous nucleotide sequence encodes a selectable marker.

117. The method of claim 117, wherein the heterologous nucleotide sequence encodes a polypeptide that improves the nutritional value of the plant cell.

118. The method of claim 117, wherein the heterologous nucleotide sequence encodes a polypeptide that improves the ornamental value of the plant cell.

5 119. A method of modulating the activity of a biological pathway in a plant cell involving a plant stress-regulated polypeptide, the method comprising introducing a polynucleotide portion of a plant stress-regulated gene into the plant cell, wherein the plant stress-regulated gene comprises a nucleotide sequence as set forth in any of SEQ ID NOS:1-155, 157-228, 230-232, 234-557, 559-572, 574-605, 607-634,
10 636-786, 788-812, 814-1262, 1264-1386, 1387-1390, 1392-1404, 1406-1444, 1446-1483, 1485-1588, 1590-1608, 1610-1633, 1634-1725, 1727-1865, 1867-1917, 1919-1927, 1929-2855, 2857-2928, 2930-2932, 2934-3256, 3258-3271, 3273-3304, 3306-3323, 3325-3333, 3335-3485, 3487-3511, 3313-3956, 3958-4078, 4080-4097, 4099-4136, 4138-4175, 4177-4279, 4281-4299, 4301-4324, 4326-4414, 4416-4552,
15 4554-4602, and 4604-5379, thereby modulating the activity of the biological pathway.

120. A plant cell obtained by any of claims 96 to 121.

121. A plant comprising the plant cell of claim 122.

20

122. A method of identifying a polynucleotide that modulates a stress response in a plant cell, the methods comprising:

- 25 a) contacting an array of probes representative of a plant cell genome and nucleic acid molecules expressed in plant cell exposed to the stress;
- b) detecting a nucleic acid molecule that is expressed at a level
different from a level of expression in the absence of the stress;
- c) introducing the nucleic acid molecule of step b) into a plant cell;
and
- d) detecting a modulated response of the plant cell of step c) to a
30 stress, thereby identifying a polynucleotide that modulates a stress response in a plant cell.

123. The method of claim 124, wherein the stress is an abiotic stress.

124. The method of claim 125, wherein the abiotic stress is selected from the group consisting of an abnormal level of cold, osmotic pressure, and salinity.

5

125. The method of claim 124, wherein expression of the nucleic acid molecule increases the tolerance of the plant cell to the stress.

126. The method of claim 124, wherein, in step b), the nucleic acid molecule is expressed at a level that is less than the level of expression in the absence of the stress.

127. A transgenic plant, which contains a transgene comprising a polynucleotide portion of plant stress-regulated gene, wherein the gene comprises a nucleotide sequence as set forth in any of SEQ ID NOS:1-155, 157-228, 230-232, 234-557, 559-572, 574-605, 607-634, 636-786, 788-812, 814-1262, 1264-1386, 1387-1390, 1392-1404, 1406-1444, 1446-1483, 1485-1588, 1590-1608, 1610-1633, 1634-1725, 1727-1865, 1867-1917, 1919-1927, 1929-2855, 2857-2928, 2930-2932, 2934-3256, 3258-3271, 3273-3304, 3306-3323, 3325-3333, 3335-3485, 3487-3511, 3313-3956, 3958-4078, 4080-4097, 4099-4136, 4138-4175, 4177-4279, 4281-4299, 4301-4324, 4326-4414, 4416-4552, 4554-4602, and 4604-5379.

128. The transgenic plant of claim 129, wherein the transgenic plant exhibits altered responsiveness to a stress condition as compared to a corresponding wild-type plant.

25

129. The transgenic plant of claim 130, wherein the transgene disrupts an endogenous stress-regulated gene in the plant, thereby reducing or inhibiting expression of the gene in response to a stress condition.

30

130. The transgenic plant of claim 130, wherein the plant exhibits increased tolerance to a stress condition.

131. The transgenic plant of claim 130, wherein the plant exhibits decreased tolerance to a stress condition.

5 132. The transgenic plant of any of claims 129 to 133, wherein the transgene comprises a coding sequence of a plant stress-regulated gene.

133. The transgenic plant of claim 134, wherein the coding sequence is operatively linked to a heterologous regulatory element.

10

134. The transgenic plant of claim 135, wherein the regulatory element is a constitutively active regulatory element.

135. The transgenic plant of claim 135, wherein the regulatory element is an regulated regulatory element.

15

136. The transgenic plant of claim 135, wherein the regulatory element is a tissue specific or phase specific regulatory element.

20 137. The transgenic plant of any of claims 129 to 131, wherein the transgene comprises a plant stress-regulated regulatory element operatively linked to a heterologous nucleotide sequence.

138. The transgenic plant of claim 139, wherein the transgenic plant expresses a polypeptide encoded by the heterologous nucleotide sequence.

25

139. The transgenic plant of claim 140, wherein the polypeptide improves the nutritional value or ornamental value of the plant.

30 140. The transgenic plant of any of claims 129 to 141, wherein the plant comprises multiple transgenes.

141. The transgenic plant of claim 142, wherein the multiple transgenes comprise multiple copies of the same transgene or comprise two or more different transgenes.

5 142. A plant stress-regulated gene regulatory element, wherein the gene comprises a nucleotide sequence as set forth in any of SEQ ID NOS:1-155, 157-228, 230-232, 234-557, 559-572, 574-605, 607-634, 636-786, 788-812, 814-1262, 1264-1386, 1387-1390, 1392-1404, 1406-1444, 1446-1483, 1485-1588, 1590-1608, 1610-1633, 1634-1725, 1727-1865, 1867-1917, 1919-1927, 1929-2855, 2857-2928,
10 2930-2932, 2934-3256, 3258-3271, 3273-3304, 3306-3323, 3325-3333, 3335-3485, 3487-3511, 3313-3956, 3958-4078, 4080-4097, 4099-4136, 4138-4175, 4177-4279, 4281-4299, 4301-4324, 4326-4414, 4416-4552, 4554-4602, and 4604-5379.

 143. The plant stress-regulated gene regulatory element of claim 144,
15 comprising a nucleotide sequence as set forth in any of SEQ ID NOS: 2704-2855, 2857-2928, 2930-2932, 2934-3256, 3258-3304, 3306-3323, 3325-3333, 3335-3485, 3487-3511, 3513-3956, 3958-4078, 4080-4097, 4099-4136, 4138-4175, 4177-4279,, 4281-4299, 4301-4324, 4326-4414, 4416-4552, 4554-4602, 4604-4612, and 4614-5379, or a nucleotide sequence substantially similar thereto.

20

 144. A method of identifying an agent that modulates the activity of the plant stress-regulated regulatory element of claim 144 or claim 145, the method comprising:
 a) contacting the regulatory element with an agent suspected of having the ability to modulate the activity of the regulatory element; and
25 b) detecting a change in the activity of the regulatory element, thereby identifying an agent that modulates the activity of the plant stress-regulated regulatory element.

 145. The method of claim 146, wherein the regulatory element can be
30 operatively linked to a heterologous nucleotide sequence.

146. The method of claim 147, wherein the heterologous nucleotide sequence encodes a reporter molecule.

147. The method of any of claims 146 to 148, which is *in vitro* in a plant cell-free system, in a plant cell in culture, or in a plant *in situ*.

148. The method of claim 149, wherein the plant is a transgenic plant, into which the plant stress-regulated regulatory element has been introduced.

149. The method of any of claims 146 to 150, wherein the agent is a stress mimic.

150. A method of modulating a stress-regulated response in a plant cell, the method comprising expressing in the plant cell a recombinant polypeptide that interacts specifically with a plant stress-regulated regulatory element of claim 144 or claim 145, thereby modulating a stress-regulated response in the plant.

151. The method of claim 152, wherein the recombinant polypeptide comprises a zinc finger domain, which specifically interacts with the stress-regulated regulatory element, and a transcription effector domain, which effects expression of the regulatory element.

152. The method of claim 153, wherein the effector domain is a transcription activation domain.

153. The method of claim 153, wherein the effector domain is a transcription repressor domain.

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154. A method for identifying a polynucleotide involved in a stress response of a plant, the method comprising:

- 5 a) contacting nucleic acid molecules representative of expressed polynucleotides in plant cells of a plant exposed to a stress condition or combination of stress conditions with an array of probes representative of the plant cell genome; and
- 10 b) detecting a nucleic acid molecule that exhibits at least a two-fold change in the level of expression as compared to the level of the nucleic acid molecule in a corresponding plant cell of a plant that was not exposed to the stress condition, thereby identifying a polynucleotide involved in a stress response of the plant.

155. The method of claim 156, comprising identifying a plurality of polynucleotides involved in the stress response in the plant.

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156. The method of claim 156 or 157, further comprising isolating the polynucleotide or plurality of polynucleotides.

157. A computer readable medium having stored thereon computer executable instructions for performing a method comprising:

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- a) receiving data on expression in a cell of a plant of a nucleic acid molecule having at least 70% sequence identity to a nucleotide sequence comprising any of SEQ ID NO. 1-5379; and
- 25 b) comparing the data on expression of the nucleic acid molecule with data on expression of the nucleic acid in a cell of a plant that has not been exposed to an abiotic stress, of a plant that has been exposed to an abiotic stress condition or combination of abiotic stress conditions, or of a combination of such plants.

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158. The computer readable medium of claim 159, wherein the nucleic acid molecule comprises one of a plurality of nucleic acid molecules, and wherein the computer executable instructions are capable performing receiving and comparing of any or all of the plurality of nucleic acid molecules.

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159. A computer-readable medium having stored thereon a data structure comprising:

sequence data for at least one nucleic acid molecule having at least 70% nucleic acid sequence identity to a polynucleotide having a nucleotide sequence as set forth in any of SEQ ID NO. 1-5379 or a nucleotide sequence complementary thereto; and

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a module receiving the nucleic acid molecule sequence data, which compares the nucleic acid molecule sequence data to a least one other nucleic acid sequence.

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/26685

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/82 C12Q1/68 A01H5/00 G06F17/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N C12Q A01H G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, BIOSIS, MEDLINE, CAB Data, SEQUENCE SEARCH

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
|------------|--|-----------------------|

| | | |
|---|---|--|
| X | <p>REYMOND P ET AL: "Differential gene expression in response to mechanical wounding and insect feeding in Arabidopsis." PLANT CELL, vol. 12, no. 5, May 2000 (2000-05), pages 707-719, XP002216347 ISSN: 1040-4651</p> <p>the whole document</p> | <p>1-4, 16-18, 42, 57-70, 81-84, 96-108, 111,114, 124-128, 156-158</p> |
| A | <p>WO 00 08187 A (VERBRUGGEN NATHALIE ;VLAAMS INTERUNIV INST BIOTECH (BE); LEE JEONG) 17 February 2000 (2000-02-17) the whole document</p> | |

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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principles or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search

10 October 2002

Date of mailing of the international search report

18. 12. 2002

Name and mailing address of the ISA

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Oderwald, H

INTERNATIONAL SEARCH REPORT

In ☐ International Application No

PCT/US 01/26685

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|---|
| A | <p>NUCCIO M L ET AL: "Metabolic engineering of plants for osmotic stress resistance." CURRENT OPINION IN PLANT BIOLOGY. UNITED STATES APR 1999, vol. 2, no. 2, April 1999 (1999-04), pages 128-134, XP002216348 ISSN: 1369-5266 the whole document</p> <p>---</p> | |
| A | <p>RUAN Y ET AL: "TOWARDS ARABIDOPSIS GENOME ANALYSIS: MONITORING EXPRESSION PROFILES OF 1400 GENES USING CDNA MICROARRAYS" PLANT JOURNAL, BLACKWELL SCIENTIFIC PUBLICATIONS, OXFORD, GB, vol. 15, no. 6, September 1998 (1998-09), pages 821-833, XP000960486 ISSN: 0960-7412 the whole document</p> <p>---</p> | |
| A | <p>SCHEMA M ET AL: "QUANTITATIVE MONITORING OF GENE EXPRESSION PATTERNS WITH A COMPLEMENTARY DNAMICROARRAY" SCIENCE, AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE,, US, vol. 270, no. 5235, 20 October 1995 (1995-10-20), pages 467-470, XP000644675 ISSN: 0036-8075 the whole document</p> <p>---</p> | |
| P,X | <p>SEKI M ET AL: "Monitoring the expression pattern of 1300 Arabidopsis genes under drought and cold stresses by using a full-length cDNA microarray." PLANT CELL, vol. 13, no. 1, January 2001 (2001-01), pages 61-72, XP002216349 ISSN: 1040-4651 the whole document</p> <p>---</p> | <p>1-4, 16-18, 42, 57-70, 81-84, 124-128, 156-158</p> |
| P,X | <p>SCHENK P M ET AL: "Coordinated plant defense responses in Arabidopsis revealed by microarray analysis." PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES, vol. 97, no. 21, 10 October 2000 (2000-10-10), pages 11655-11660, XP002216350 October 10, 2000 ISSN: 0027-8424 the whole document</p> <p>---</p> | <p>1,2,4, 16-18, 42, 57-60, 63-68, 81-84, 124,127, 128, 156-158</p> |
| | <p>---</p> <p>-/--</p> | |

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/26685

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|---|
| P,X | <p>EP 1 033 405 A (CERES INC) 6 September 2000 (2000-09-06)</p> <p>see SEQ ID NO: 38097 page 1 -page 26; claims 1-34 page 89 -page 90 page 318 page 322</p> <p>-----</p> | <p>42,43, 57-70, 81-87, 96-108, 111,114, 121-123, 129-144, 146-151, 159-161</p> |

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 01/26685

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 152-155
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
claims 1-6, 16-19, 22, 34, 40, 42, 43, 57-70, 81-87, 96-114, 121-144, 146-151, 156-161 all partially

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

Invention 1: claims: 1-6,16-19,22,34,40,42,43,
57-70, 81-87,96-114,121-144,146-151,
156-161 all partially

A method of identifying a stress condition to which a plant cell has been exposed comprising a polynucleotide with SEQ ID NO: 1. A method for determining whether a test plant has been exposed to an abiotic stress, a method of producing a transgenic plant, a transgenic plant, a plant, a plant cell, a seed, a cDNA or genomic library, a method for monitoring a population of plants, a method of selecting a plant having an altered resistance to an abiotic stress condition, a method of modulating the responsiveness of a plant cell to a stress condition, a method of modulating the activity of a biological pathway in a plant cell, a method of identifying a polynucleotide that modulates a stress response in a plant cell, a plant stress-regulated gene regulatory element, a method of identifying an agent that modulates the activity of a plant stress-regulated element, a method for identifying a polynucleotide involved in a stress response of a plant, a computer readable medium having stored thereon computer executable instructions or a data structure comprising said polynucleotide.

Invention 2-5379: claims 1-151,
156-161 insofar as applicable; all partially

same as invention 2 but comprising a polynucleotide sequence in the order as given in the claims (invention 2 is limited to SEQ ID NO: 2 and invention 5379 is limited to SEQ ID NO: 5379).

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 152-155

Present claims 152-155 relate a product/compound defined by reference to a desirable characteristic or property, namely a polypeptide that interacts with a plant stress-regulated regulatory element.

The claims cover all products/compounds having this characteristic or property, whereas the application provides support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT for only a very limited number of such products/compounds. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Independent of the above reasoning, the claims also lack clarity (Article 6 PCT). An attempt is made to define the product/compound by reference to a result to be achieved. Again, this lack of clarity in the present case is such as to render a meaningful search over the whole of the claimed scope impossible. Consequently, no search has been carried out.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 01/26685

| Patent document cited in search report | | Publication date | Patent family member(s) | Publication date |
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| WO 0008187 | A | 17-02-2000 | AU 5419799 A | 28-02-2000 |
| | | | CA 2336227 A1 | 17-02-2000 |
| | | | WO 0008187 A2 | 17-02-2000 |
| | | | EP 1100940 A2 | 23-05-2001 |
| | | | JP 2002524052 T | 06-08-2002 |
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| EP 1033405 | A | 06-09-2000 | CA 2300692 A1 | 25-08-2000 |
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